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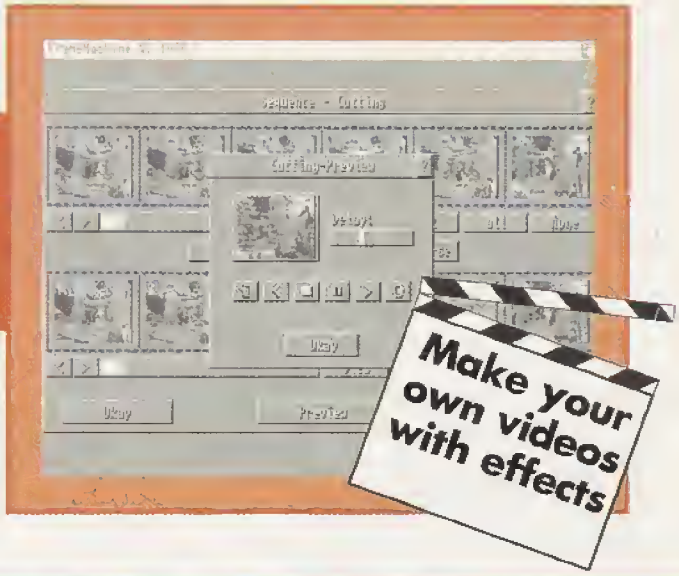

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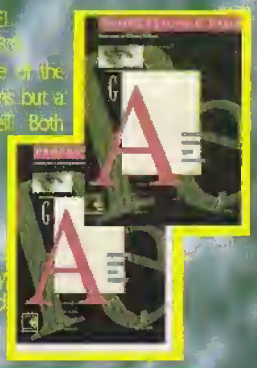

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Published by: Saturday Magazine PTY. LTD.
21 Darley Road, Randwick NSW 2031
Ph: (02) 398 5111 Fax: (02) 398 5322
Editor: Andrew Farrell, Phone (02) 879 7455 Fax : (02) 816 4714
Entertainment Editor: Phil Campbell
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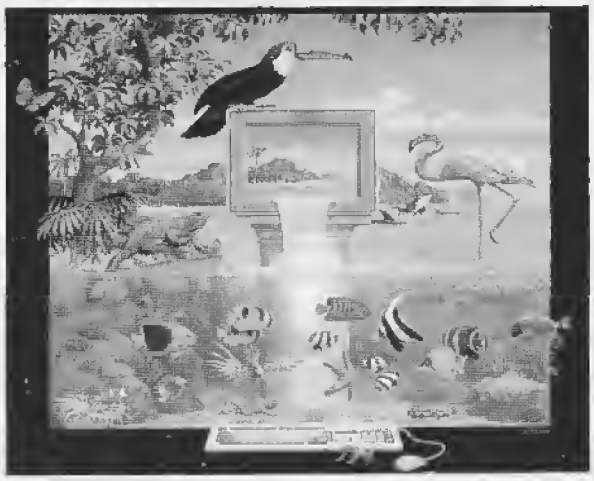
Production: Brenda Powell Layout: Tina Goins
Subscriptions / Back Issues: Darrien Perry (02) 398 5111
Distributed by: NETWORK Distribution Printed by: Ian Liddell Pty. Ltd.



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Editorial

It is true Amiga owners are a ferociously proud lot. Given half a chance, we will defend our humble Motorola powered computer to the very last. This has become an increasingly popular sport of late, especially given the dramatic rise in the number of *Windows* users.

PC owners are fast to quote Mhz and Megabytes as the ultimate comparison of power. Likely they will also draw upon the mighty bastion of software available for their treasured Intel boxes. I have always avoided tacky discussions as to which platform is best.

The answer is clearly neither. Both have their shortcomings. Both have their strengths. However, in the interests of fairness, I think it is important that Amigans are armed with the facts. At least they will stand a chance against the great throng buzzing around who think the Amiga is but a toy.

You cannot win any such discussion. However, you may at least set a few misconceptions straight.

First up, there is absolutely no way two completely different machines can be matched purely by speed. Just as you would never measure the power of a motor vehicle purely by the top speed it can reach in a long straight, or for that matter the maximum RPMs of the engine. Yes folks, quoting Mhz at each other is not the starting point for any fair examination.

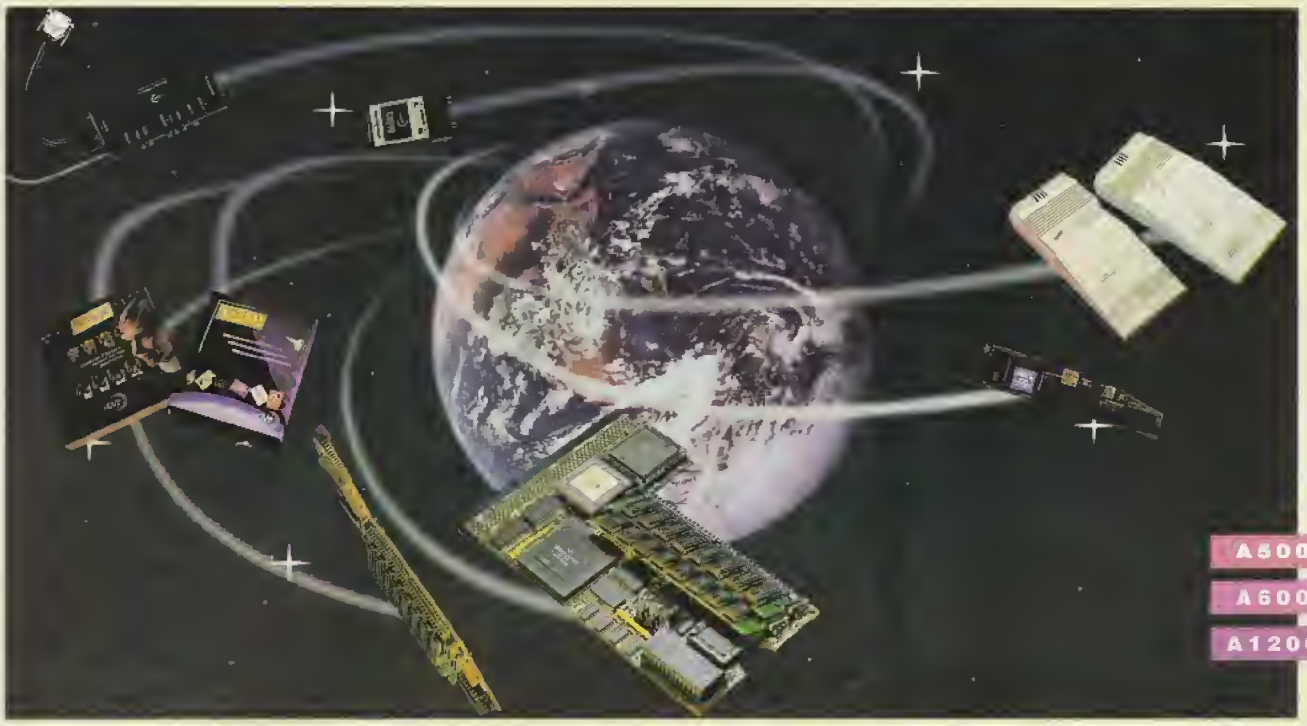
Amiga technology is considerably different to your run of the mill PC. You see, the Amiga's CPU is helped by custom chips which work in parallel. They can be told to go do something, and take a huge working load off the main processor. This is most evident in the area of graphics - an essential part of any interface in today's GUI world.

Indeed, for a PC to match the speed of Amiga's graphics interface, it would likely need to be one of the more recent VESA or Local BUS machines. These newer designs have a faster path between the graphics, memory and CPU areas of the computer. Some form of graphics accelerator would also be required to bring it further up to speed.

Workbench may sound like something from the local hardware store and in fact some would say the early versions appeared to have been. However, the current operating system offered on the latest Amigas is a slick number. Multitasking has been with us since 1985 and improved upon ever since. Workbench 3.1 now offers high compatibility with existing software, excellent control of your preference settings, the ability to have applications communicate with each other, and an increasing amount of support for program writers.

In short, Workbench has come of age. You can make it look however you like, and it functions like a well tuned race car. On the PC, you would have to be running IBM's OS/2 to begin any fair head to head battles of performance. As any Intel owner will tell you, OS/2 requires at least eight megabytes of RAM. Our Amiga will do the same in 512K, although 2Mb is generally adequate. Perhaps by now your Amiga is starting to stack up a little better. Remember to leave while you're ahead.

Andrew Farrell



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Back in stock

1. The "Golden Image" Amiga hand scanners with Migraph are now back in stock and can be obtained thru your local retailer.

2. The 86 Pin Adaptor which allows you to run your disk drive and e.g. the cartridge, is now back in stock.

3. We have a new shipment of the Bruce Smith Books including "**Mastering AMOS**" & "**Mastering Amiga C**" and these are also available thru your retailer or book shop.

4. We have just received new stock of the Educational Programs - "Spelling Fair - 7 to adult" (now called **Fun School Spelling**); "Merlin Math - 7 to 11" (now called **Fun School Math**); as well as "Paint & Create - 5 to 11" (now called **Fun School Paint & Create**).

5. Finally we have also received new stock of the Automouse/Joystick switch.

Finally, for you A1200 owners, do not forget **OVERKILL**, the brilliant new game, written specifically for the A1200, and of course the Bruce Smith book - **Insider Guide for A1200**.

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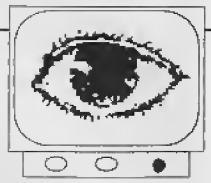
Media Watch



Attitude

Last month we mentioned the promos for ABC current affairs show *Attitude*, in which various Amiga glimpses appeared promoting a show on hackers. Indeed, the Amiga featured quite noticeably in the show - mainly just playing pretty demos in the background - and lots of people picked up on it. David Johnson of Springfield NSW, Joe Hanna-Rivero of Parafield Gardens SA (and no, you don't get a free sub until you learn to set your printer's right margin properly), and several more people. The definitive spotting, though, came from Nic Christodoulou of Innaloo, WA:

"It started with an interview with a guy named T.C. who had his face shadowed and a video wall behind him. To my surprise, the Spaceballs State Of The Art demo was running. Next the program went to a person who ran a BBS and was explaining the basics of phreaking and software piracy, and beside his (IBM) BBS machine there was an Amiga 500 running a demo.

"The program then cut to Norwegian event called "Hacking at the end of the universe" where they showed a 2000 and a VIC 20. The next scene was T.C. again, this time with *James Pond II* running in the background.

"Later the program talked about computer pornography, which they demonstrated by showing a picture on an Amiga WB3 screen with *ViewTek* - cutting at the strategic moment, of course ..."

Shattered Promises

David Johnson also spotted a 1084S monitor displaying an image of a fractured skull on a promo for *Shattered Promises*, with what looked like an Amiga under it.

ABC Open Learning

Daniel Everton of Sunshine Beach, Qld, and Emmanuel Farrugia of Chipping Norton, NSW, spotted an A2000 hooked up to two monitors displaying satellite imagery on an ABC Open Learning show about how satellites and PCs help in environmental studies. The show plugged cheap PC educational aids quite heavily, but didn't give the Amiga any special mention.

Daniel Everton also spotted an Amiga reference in an article in *OMNI* magazine on a group of people who simulated the meeting of two different alien cultures - the world being generated on an Amiga. And Mr Everton wants a subscription. He really wants a subscription. He said "P.S. Please!" Well, Daniel, we're not giving one to somebody who spells satellite "satalite"; sorry!

Minder

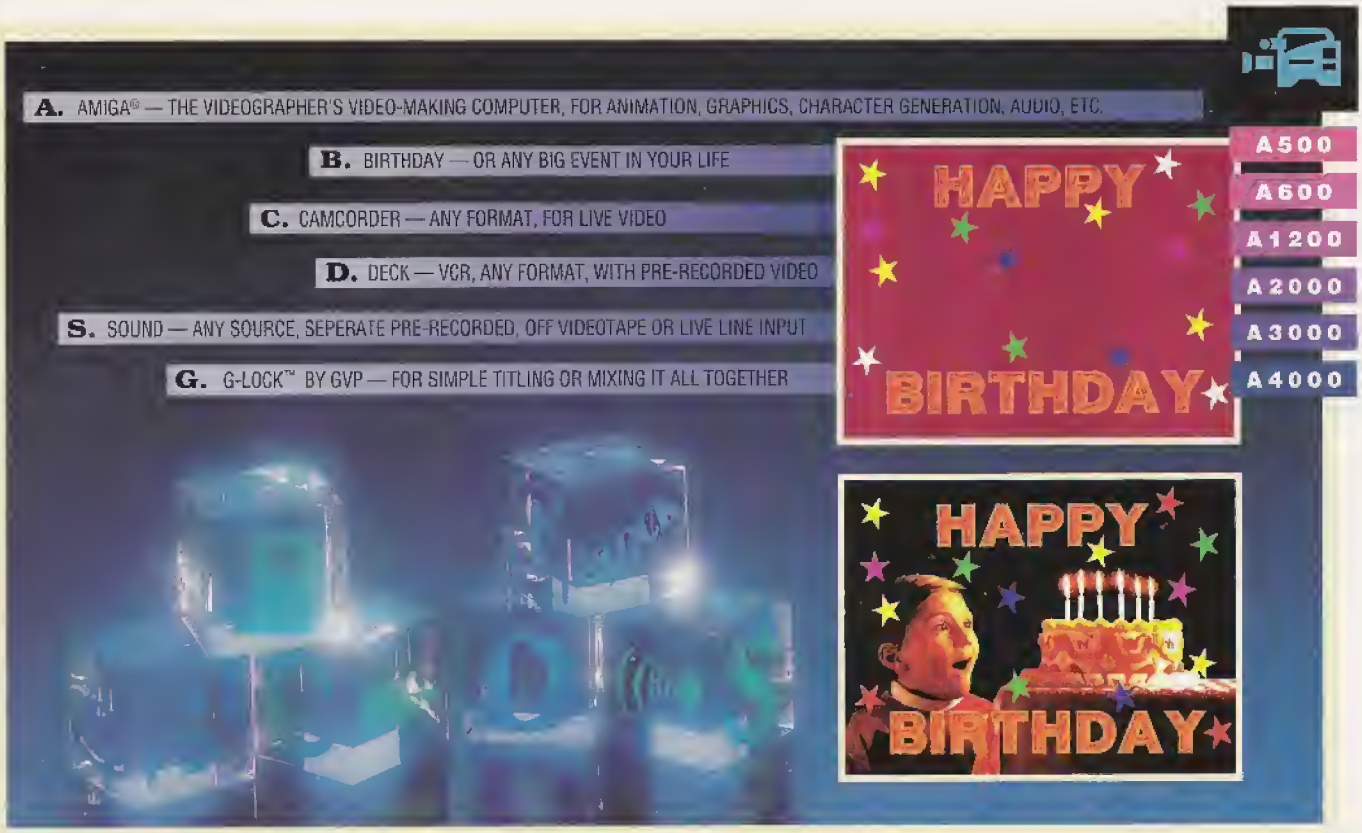
Andrew Seabrook of Lameroo, SA also spotted the *Attitude* show, and an Amiga 1000 on *Minder* late at night, being used by Ray but using an IBM keyboard - ah well. The same machine featured in the Terry McCann days when *Daley Into Europe* was first launched. He also noticed that CBM are still sponsoring the resolutely average British soccer team Chelsea, seen here on *Monday Night Soccer*.

Arthur C. Clarke

Julian Armstrong of Narrogin, WA noticed that in one of Arthur C. Clarke's latest novels, *The Ghost from the Grand Banks*, he mentions in the afterword that he has been using an Amiga 2000 for his research into chaos theory and fractals. Julian noticed in a newspaper article that Clarke is now using an A3000 to experiment with planetary orbits, satellite trajectories, chaos and other scientific stuff, which oddly enough is the same argument frequently advanced in the editorial office to justify playing *Solar System Wars* during the working day.

User Group Update

The Wollongong Amiga Group (WAG - the Amiga group you go to when you should be at school) meets the second Thursday of every month at 7pm at Primbee Primary School, south of Warrawong. Membership is $20 per annum per family, it has the usual software and hardware libraries and 155 members at present. Send all mail to the Secretary, Peter Stanhope, at 155 Jacaranda Ave, Figtree 2525, or call the President, Keith Brooks, on (042) 293 669.



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NOTEPAD

Fish CD upgraded

Fish disks on CD are nothing new, but the latest version from HyperMedia Concepts contains some neat improvements as well as the first 900 disks of the library. All the filenames are proper Amiga format - none of this MSDOS.YUK filename stuff. There's a better system for generating floppy disks from the CD, taking only about two minutes a disk.

ParNet support has been improved, with the disk set up to boot as Unit 1 if used with a networked CDTV, and the icons are laid out with Workbench 2 in mind. There's also an archived BBS version compressed by disk AND by program, with MS-DOS filenames.

The disks are available from HyperMedia Concepts in the US on 414 632 3766; there is no Australian distributor yet.

Power Peripherals sells GVP distribution

In a startling move, South Australian company Power Peripherals, long the Australian face for huge Amiga hardware developers Great Valley Products (GVP), have sold distribution rights over to Peripheral World in Victoria.

Peripheral World have taken over Australian distribution of all GVP products, Powercopy Pro, Scala (Amiga range) and selected Microbotics and Macrosystems products! Peripheral World is committed to the long-term longevity and success of the Amiga family of computers. All dealer enquiries should be directed to Peripheral World at 506 Dorset Rd, Croydon Vic 3136, phone (03) 725 3233, fax (03) 725 6766.

New Electronic Design goodies

Electronic Design's Video Converter now works in Amiga 2000, 3000 and 4000 models. All of the Electronic Design genlocks now come with demo versions of Scala 500; the Sirius-Genlock now comes with 20 free scalable fonts.

The new software for the FrameMachine real time digitiser board, version 2.0, features new rendering routines, AGA support, better interface and more.

Montage 24 titling

InnoVision Technology have announced their new *Montage 24* package, which brings professional video titling to Amiga AGA, OpalVision and ImpactVision 24 systems. *Montage*, which has been out for the Video Toaster for some time, is a dedicated network grade titling package with razor sharp anti-aliased titles, click and drag font scaling and loads of juicy effects.

There's embossing, gradient fills, transparency and soft shadows for text and assorted great 24 bit effects for backgrounds.

The package comes with eight scalable typefaces and ten more are optional, and you can load Toaster and Chroma fonts, or with an optional module you can use PostScript type 1 and 3 and Compugraphic fonts. The package sells for $US399.95 from Innovision, 510 638 8432. An Australian distributor will be announced soon, so check with your local dealer.

HotPoint snags another

Gremlin Software have signed HotPoint to market their products in Australia and New Zealand. Gremlin are the makers of *Zool*, and they join many other game makers signed up with HotPoint in recent months. Contact HotPoint on (02) 906 5088, fax (02) 906 4893.

Scala - you can't beat it

Yes, that's right, another major corporation has used *Scala* for its presentations. Coca Cola in Israel made a big impression with a huge *Scala* controlled presentation at the Israeli Exhibition of Consumers. Their stand featured 64 monitors and two video disks, along with lasers and plenty more impressive stuff. The *Scala* multimedia presentation package is deservedly popular for its high power and great flexibility with a simple interface.

Amiga Graphic Artists' Special Interest Group

The mercifully abbreviated AGASIG is an organisation for anybody who makes pictures on the Amiga, still, moving, flat or 3D, but with an emphasis on 3D rendering.

The AGASIG has now gathered enough through its annual $20 membership fees to open a graphics only bulletin board, Graffix Chaos on (02) 545-4145, which is dedicated to graphics related files not previously available in Australia like objects, tutorials, textures, DEM files and so on. Membership with BBS access is an extra $5 a year, and modemless members are entitled to all the files at meetings if they pay this extra.

For more information contact Nik Vukovljak (A.G.A.Sig Co-ordinator) on the Amiga Video Echo, Graffix Chaos or phone (02) 805-0932.

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With this bonus program you can make your animations play up to four times faster!

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"...the best program in show business." *Amiga Format (UK)*

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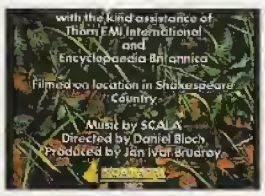
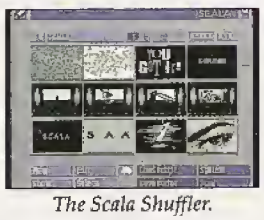
The Scala main menu.



Scroll text by Scala.

The Scala edit menu.

It's a Scala world!



The Scala Shuffler.

The SCALA group:
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SCALA
Why make it harder?

AMOS News

Patient AMOS users have been waiting a long time for the AGA update promised with the release of PRO v2.0 with the compiler. It was then planned for the end of September. But now, it will not see the light of day until the end of December. So what is he working on? The PC version! But soon we will see the release of:

- The Workbench Extension allows you to create true Intuition programs independent of the AMOS system. Similar to Blitz 2's Amiga mode, except that double buffering and BOBs will somehow still be possible on the workbench. Europress felt that this was the priority over AGA. Anyway, with Intuition, accessing AGA will be possible with a bit of tinkering.
- The Turbo Extension is now up to version v1.76 and it will remain like this until it is released commercially. The new version will include vertical Blits, which will allow the creation of sine scrolls at 50 frames per second, and plenty more. The commercial version should be available soon from Public Domain Plus.
- RAMOS BBS is an AMOS support Bulletin Board System that currently has several BBSs linked in with more planned. This net is linked to the Amiga File Server (02) 876 8965, with plans afoot to link with Predators BBS (02) 604 6816.

Toaster wins Emmy

The respectability of Amiga graphics continues to grow, with the pilot episode of the *Babylon 5* science fiction drama winning an Emmy Award for its special effects, many of which were done on a NewTek Video Toaster. It's practically unheard of for a pilot episode to win an Emmy in this category.

Nobody in Australia uses the Toaster because it uses the American NTSC video standard, but the locally made OpalVision hardware and its soon to be released add-on modules do everything the Toaster can and much more, so the future looks bright!

On the subject of showbusiness, Warner Brothers' new *Animaniacs* show - another one we'll have to wait a long, possibly infinite time to see in Australia - uses GVP's *ImageFX* package for some of its effects.

Huh? What? Eh?

Commodore aren't making IBM compatible machines any more, as we told you a while ago. And the machines that Commodore aren't making are being sold in Europe by Acer.

Confused? Well, Acer make the IBM compatible boxes, put a Commodore label on them and sell them, while Commodore concentrates on Amiga products. Commodore PCs are popular in Europe, so it made sense not to throw the market share away when the company dropped the line.

Network in your pocket

US company Socket Communications is selling PCMCIA Ethernet network adapters for Hewlett Packard's OmniBook 300 sub-notebook. Big deal, I hear you say; well, they work on Amigas with PCMCIA sockets too. This means with a plug-in interface the size of a credit card you can hook up any Ethernet network and talk to other machines at very high speed.

Commodore will be including network support in AmigaDOS very soon - the basic system is complete - and with their new move to farming out Amiga technology to anybody who wants to develop it, Amigas might finally make the big network leap into credibility.

Cordless Wacom Pen

The Wacom pressure sensitive graphics tablet, which uses an innovative cordless pen that doesn't need batteries, works fine with OpalVision - you just have to use the right cable.

The acclaimed Wacom tablet's design lets artists use the stylus exactly as if it were a normal pen, with no trailing wires, unwieldy batteries and magnets or confusing response oddities.

High Speed I/O

The Amiga hardware is generally excellent, but there aren't many options if you need more or faster serial and parallel ports. Another player's entered the game with Canadian company Pre'Spect's new MultiFaceCard. This is a half length card for the Amiga 2000, 3000 and 4000, which will work on the 500 with an external expansion chassis.

The board offers four fast ports, two parallel and two serial, all of which can work at once. You can also use more than one MultiFaceCard at once. The board comes with PIT-NET, a parallel port network for up to 256 Amigas, which is ParNet compatible and will hook up to ParNet equipped remote Amigas whether or not they have MultiFaceCards themselves.

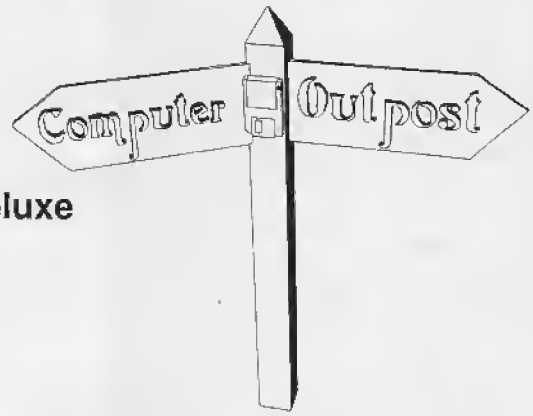
Make your own Adventure

Infocom *Dream Weaver* is a new program which lets you easily create your own stand alone mouse driven text and graphic adventure games, without knowing anything about programming. *Dream Weaver* adventures can have up to 120 rooms on each of 10 levels, allow use of text, graphics and sound, keyed exits, fixed, moveable or wandering objects, point scores and more.

The program needs at least 1.5Mb of RAM, and includes two adventures. *Dream Weaver* costs less than $US30, and Amadeus Computers (02) 652 2712 are trying to get it in stock before you read this.

If you feel lost, helpless and confused,

Just follow this signpost!



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Special Report

Word of Commodore, Pasadena

The World of Commodore show in Pasadena, California from the 10th to the 13th of September brought considerable news for Amiga users. Jim Dionne, President and General Manager of CBM's US operations, admitted that some of his managerial decisions hadn't been popular but stressed that Commodore is now "a much stronger company and we will make a profit this quarter."

This profit depends on sales of the new CD32 console, which will be hard to find in the US until the Winter Consumer Electronic Show (CES), scheduled during January in Las Vegas, Nevada. Commodore is aiming the CD32 to be a big Christmas gift at the end of 1994, and Dionne believes US CD32 sales will help buoy America's sluggish Amiga market.

The Amiga 4000 tower model may be officially released by the end of 1993. The media have known about this monster video machine for some time, but Commodore's meagre cash flow of late didn't allow them to put it into production. The machine has two video slots, on-board SCSI II and IDE interfaces, five Zorro III slots and five externally accessible drive bays, and there were mutterings about a trade-up plan for A2000 and A3000 users.

The first, buggy version of the AAA chipset was announced by Lew Eggebrecht, Vice President of Commodore Engineering. The new chipset runs 10 to 20 times as fast as AGA, and allows full 24 bit graphics. Computers using the full, working AAA architecture will be out in mid-1994. These new machines should also include RTG - Retargetable Graphics - support in their operating system, allowing graphics to work irrespective of the hardware they're being displayed with.

CD32 compatible CD drives for both the 4000 and 1200 should be available by the end of this year.

AmigaDOS 3.1 is basically ready for release, and includes a SCSI file system and the additions to support CD peripherals for the 4000 and 1200. Eggebrecht also mentioned the possibility of Reduced Instruction Set Computing CPU based Amigas, though this is still very much in the future.

On the subject of fire breathing monster Amigas, US Cybernetics announced their frankly frightening WARP System board at WOC Pasadena. This startlingly quick processor board uses parallel RISC processors to attain downright unfair speed for rendering or any other processor-intensive operation; 30MIPS and 4.3MFLOPS for the basic model and 200MIPS/50MFLOPS for the professional unit. Adding more processors up to a maximum of three on each board makes them more powerful in direct progression - three processors, three times the power - and more than one board can be used at a time in any Zorro II or III slot, further beefing up the machine.

What's the down side? They don't run Amiga software. You need specially developed versions of your software to work on the WARP System. The system will be available in early 1994.

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Amiga Format July 1992

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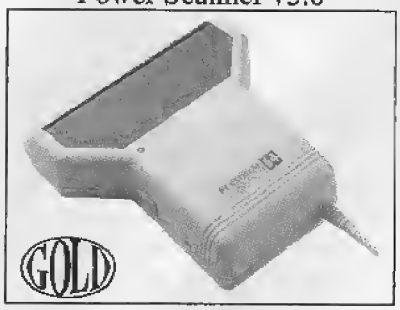

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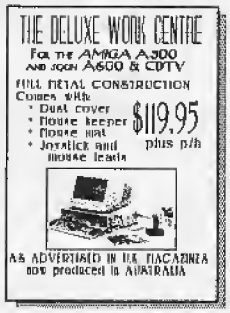

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Letters TO THE EDITOR

Amiga interfacing

Dear Editor, I am currently studying computing and applied physics at Victoria University. Here we have a subject on PC Interfacing, which involves controlling various instruments, lights, lab equipment etc. We use an IBM PC and a PCL-718 interface card that allows us to control equipment, and send and receive data from it.

I own an Amiga 2000, and was wondering if possible if this interface card is for use on the Amiga, or a manufacturer you know produces one specifically for the Amiga.

Could you please also recommend any books on this topic for the Amiga in this area that may assist me. I have also heard that you can buy robotic arms etc, that also allow control from the computer via appropriate programming.

Thanks a lot, Ed, your magazine makes the Amiga numero uno!

W Barton
Tullamarine Vic 3043

Ed: You want to find an interface unit that is serially controlled - you might even be able to get one that plugs into the Amiga's PC bus. Phoenix make an I/O board that might be of use to you, too.

A3000 Workbench 2.x

Dear Andrew, I am writing regards to the *Commodore Amiga Annual 1992*.

In this issue, a section was done by Scott Shambarger on the Amiga 3000 and Workbench 2.x compatibility.

He has listed a number of programs that can turn things off and on the help enable programs to run with the 3000/ work bench 2.x.

As you may have guessed I own an Amiga 3000. Please, oh please would you tell me where to find these programs.

The names of the programs are as follows: NewZap, BootCache, Disable, SetCPU.

It's so frustrating when programs (Ndos and Dos) will not run on this dream computer (well, it was until the 4000 came out).

Another question I have is, why do some programs I run (or warm boots) run very slow, or run fast then very slow?

Mark Richmund
Albury WA 6330

Ed: NewZap is on Fish 574. BootCache is on Fish 418. SetCPU is on Fish 400 and Degmoder, which lets you turn off all sorts of things to make badly written programs run, is on Fish 866. If you play with this program, you should be able to fix most problems.

Action Replay

Dear Andrew, I recently purchased my first copy of ACAR (by the way, congratulations on a good magazine and it's nice to be able to read ads where you don't need to try and calculate the price based on the current exchange rate,) and read your column Andy's Attic, you had a letter from a Peter Gleeson of Dee Why NSW who had a problem using his A590 Hard Drive with an Action Replay MkIII.

I had a similar problem and after making some inquiries found that an adapter was available, it is called an A500 Dual Port Expander and is produced by Datel. Mine was purchased from MacroSoft in SA who were the Australian agents for Datel but apparently are now out of business. I believe that Don Quixote Software in Toowoomba Qld may be the new agents.

Anyhow, I have since upgraded to an A2000 and have sold my MkIII but not my adapter, so if you would pass this information on to Peter he can either try Don Quixote or contact me and I will sell him mine for $40 (maybe you could suggest some method of payment, I have never done this before).

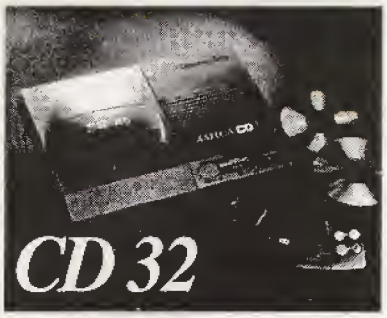
Do you have any information regarding the new level Action Replay cartridge? I believe there is a MkIV coming soon and an interested to know what the improvements are and how it compares to the Action Cartridge Super IV advertised in *Amiga Format* (sorry, I only recently discovered your magazine). I wrote to the company in England who sell them about two weeks ago but don't expect to hear from them too soon. They also advertise a thru port adapter. You probably guessed I haven't bought a cartridge for my A2000 yet, I'm waiting to see if the MkIV happens.

Well that's all for now, by the way, although they both work together the cartridge will not "read from" or "save to" the Hard Drive, that is unless they changed the MkIII when they made it Workbench 2.0 compatible. The Action Cart. Super IV advertises that it supports Hard Disk partitions but makes no mention of an A2000 version.

Stuart Crossfield
Geelong Vic 3216

Ed: Sorry, but we haven't received any news of the Action Replay IV cartridge. The Action Replay III certainly does have considerable shortcomings on any modern machine.

HOT HOT HOT HOT HOT



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BRILLIANCE

Watch Out, King Tut

by Jarrod Pudsey

The latest artistic offering for the Amiga has hit the shelves, but is there enough room for another paint program or does Deluxe Paint already take up too much precious space?

When it comes to paint and animation the Amiga is first class, so there's little wonder several paint packages are available. Electronic Arts' *Deluxe Paint* program set the standard for pixel art and has been around for as long as I can remember.

Like the ancient pyramids it certainly stands the test of time and is currently going through its fourth version. Being the King Tut of HAM for so long, it's about time they saw some strong competition. A formidable rival has surfaced in the form of the new Digital Creations program, *Brilliance*!

Two in one, or one in two?

Like *Deluxe Paint*, *Brilliance* is a complete paint and animation package providing all the popular features such as stencil masking, transparency painting and brush morphing as well as some extra features of its own. Despite being two programs, *Brilliance* and *TrueBrilliance*, the only difference is the palette support in each. One allows you to paint with more colours than the other.

Brilliance is the register based version, allowing painting and animating in 2, 4, 8, 16, 32, 64, 128 and 256 colours, while *TrueBrilliance* is the HAM (hold and modify)/Truecolour version allowing the use of even more colours. *Brilliance* is fully AGA compatible, therefore, using an AGA machine (A1200 or A4000) allows an even larger palette of colours and a greater number of screen resolutions when using either version. The maximum number of colours is 16.8 million. Together they support any graphics mode available on any Amiga.

To use *Brilliance* requires an Amiga with DOS 1.3 or higher with a minimum of two megabytes of RAM. As with most software today an accelerator is recommended, although I find with paint programs that extra RAM is more important than acceleration, unless of course you plan on becoming heavily involved with the more math intensive operations like morphing.

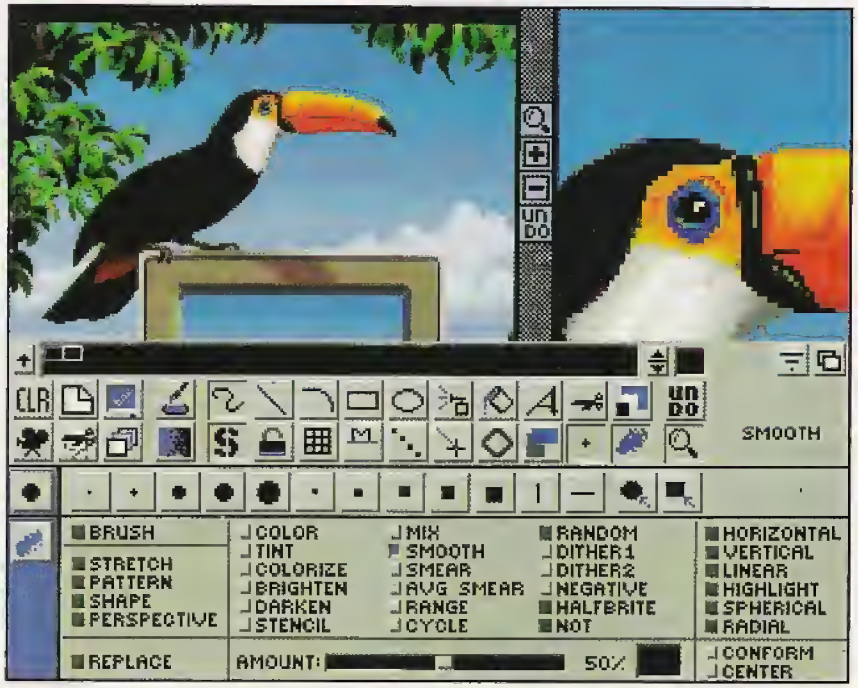
Brilliance uses a security key or dongle which plugs into the joystick port of the Amiga in order to run. Recently I have been collecting a box full of these unpleasant little devices. They appear to be the trend for the future.

The dongle system also requires the installation of a 24 digit security code file, which matches that of the dongle, onto the hard drive or set of *Brilliance* disks for users without a hard drive. Owners of A600s will find that they require an extension lead to connect the dongle key to their computer, something I am sure they will find very aggravating.

Up and running

The first thing noticeable about *Brilliance*, especially for users of other paint programs, is the screen layout. The box states "Professional Paint and Animation" and the program is just that, professional. The layout consists of a main menu panel across the bottom of the screen with all the special tools and functions arranged in two rows.

It's at this point you find out there are no pull down menus - yes that's right, none at all! Instead it uses stackable panels. Each function has its own tool panel which appears underneath the main menu.



Brilliance offers a large number of paint modes and an excellent magnify function

This feature alone is the most impressive new development that *Brilliance* incorporates. It not only adds to the professional feel of the program, it also increases the speed at which operations can be performed. Each tool or operator has its own panel consisting of everything needed in order to perform that function.

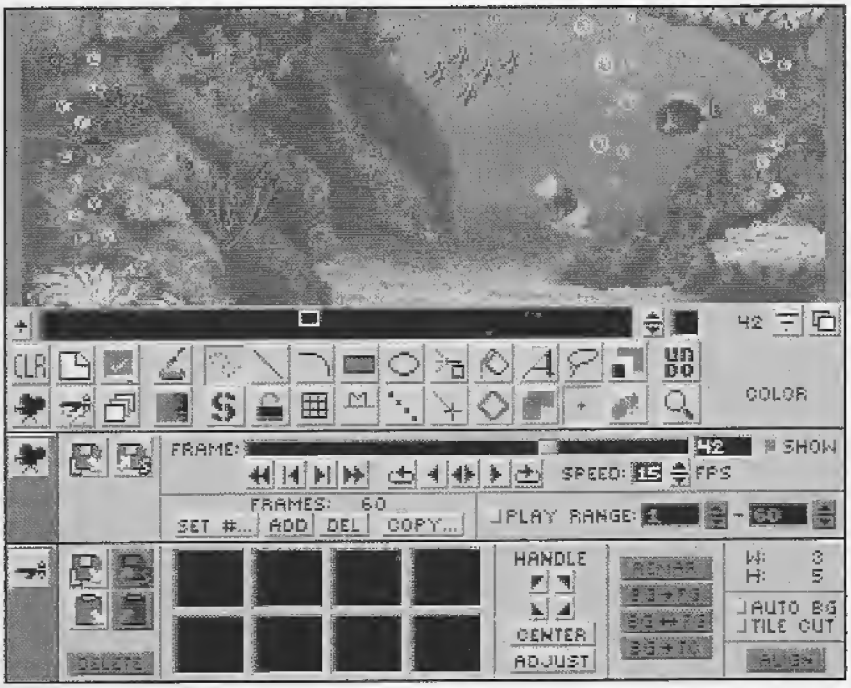
For example, the animation menu consists of a VCR style control. There's buttons for set, add and delete frames, frames per second. This cuts out the need to go searching through a pull down menu every time you wish to alter the frame setup or change the speed of the animation.

Everything is at the reach of a mouse-pointer click and this process is the same for every other function menu. The menu panels themselves consist of better defined and well laid out icons, primarily due to the fact that they use more colours, and as an added bonus the colours in the menus are not related to the colours in the palette, so changing a certain palette colour or loading in a HAM or Truecolour image will not affect the menu colour. Included in the main menu is a help area which displays information on the suggested icons as you move the mouse, as well as the currently selected tool and draw mode for that tool.

One of my old favourites has made a comeback and that's the horizontal palette. The stackable menus can be arranged in different orders according to the operations needed to be performed and can be given a hotkey designation. Up to nine pre-configured custom menu layouts can be stored using the keypad on the keyboard.

DPaint similarities

As mentioned before, *Deluxe Paint* set the standard for painting programs and this is evident when using *Brilliance*. There's a number of familiar functions and compatibility while providing a different and more advanced working environment. This is apparent when using the keyboard shortcuts - most of them are the same as *DPaint* and some, like menu toggle on/off, use



The brush animation control menu

their own key plus the *DPaint* equivalent key. All the features of *Brilliance* are the same or similar to *DPaint* with some exciting new differences.

What's new?

Most of the new features in *Brilliance* are added bonuses to the existing features of paint programs used on the Amiga. The first of these is the multiple undo/redo function. This function uses a memory buffer which allows you to set aside RAM in order to increase or decrease the depth at which you can undo and redo operations within the painting area.

It is possible to achieve over fifty undo levels using a buffer of one megabyte - not that you would ever need that many levels.

Brilliance also uses multiple page buffers, allowing an unlimited number of pictures or animations to be loaded onto separate pages according to the amount of RAM available. Each page can have its own name and its own individual palette.

The number of brushes that can be used at any one time in *Brilliance* is increased by using an eight well brush holder. This allows up to eight brushes to be stored on the cut brush menu along with a thumbnail image of the brush.

Powerful airbrush

A more powerful airbrush tool has been included. It provides three different modes. Fine spray uses a one pixel spray, Splatter uses the currently chosen pen tip and Shape permits a brush to define the shape of the nozzle or a mask where the background colour of the brush acts as a stencil and the foreground colour of the brush is the area where paint is sprayed.

Each airbrush tool has an additional adjustable value of paint flow-rate and nozzle focus, as well as the option of being able to paint with a single colour or a gradient of colours.

RPM or Realtime Preview Mode gives the user the ability of moving a pen tip or brush over the painting environment and instantly getting the result of the selected draw mode operation without altering the present picture. The draw modes which utilise this feature are Tint, Colorize, Brighten, Darken, Dither 1, Dither 2 and Negative.

For example, when using the tint draw mode the current coloured pen tip can be moved over the picture to see what effect that colour has if used to tint the colours in the picture.

The remaining draw modes available in *Brilliance* are Color, Stencil, Mix, Smooth, Smear, Average Smear, Range, Cycle, Random, Halfbrite, Negative and Not. An adjustable amount slider can be used to alter the level of Dither 1, Dither 2, Brighten and Darken modes. Line, Fill and Airbrush tools have their own separate memory of the selected draw mode.

A powerful magnify tool has been added which uses 31 magnification levels, as well as the option in the register version of viewing the magnification in Segmented or Un-segmented mode.

In Segmented mode the pixels are defined by a bounding black line making up a grid of the pixels within the magnified area permitting easy editing on a pixel by pixel basis. I must say however, that at the correct screen magnification it produces the most impressive screen flicker that I have ever seen.

Drawing tools

A special curve tool is available along with the usual arc curve tool for Bezier curves. A Bezier curve is similar to the B-spline curves used in some 3D modelling programs except here it is used to draw a 2D line. There is a mathematical relationship to the resulting curve and it consists of four control points which can be move to alter the shape before pasting it to the background.

Images can be saved in HAM8, 15 and 24 bit RGB to later view on an AGA machine or 24 bit display. When loading an anim, multiple files can be loaded and appended. They can be either anims or pics, and anims can be saved in OP5 (*DPaint* compatible), OP8-16/32bits, or as individual frames with a .000x suffix.

Tweening is the same as *DPaint*'s move requester and allows you to animate the x, y, and z position, rotation and acceleration of a brush to simulate depth and perspective, leaving the computer to fill in the betweens. You can also tween the opacity of the brush to create an even more realistic depth of field.

Two unfortunate absences in *Brilliance* are of the animation light table and the palette color mixing function.

The need for speed

Brilliance is said to operate faster on a 68000 machine than other programs do on a 68030 machine. Exactly how well does it live up to this expectation and how fast is it compared to *Deluxe Paint*?

In general, *Brilliance* is fast. Apparently the program has been written in full machine code to optimize performance. The basic program operations are speedy to use even on an A500. Examples are when creating an animation, the anim frame update while dragging the frame count slider is noticeably faster than *DPaint*, and when moving a large brush around the screen there is less jumping motion due to the brush trying to keep up with the pointer.

While there are faster operations than *DPaint* however, there are also some which are slower. Brush warping like Resize is faster with larger brushes on *Dpaint*, as is the Shear function.

The most annoying factor with *TrueBrilliance*'s speed is the lag time after every paint operation. When drawing a long line or pasting down a brush the mouse pointer displays the wait icon for a second. I could understand this if anti-aliasing or a draw mode was activated, but this is in normal colour mode on an A4000 with 18 megs of RAM - something *DPaint* does not have a problem with.

Morphing slow!

When more complicated operations are involved, like morphing, more accent is placed on a program's speed performance. To compare *Brilliance* to *Dpaint* I used a morph in Hires HAM between a large sphere and a large square. A morph is the transition calculated between two brushes over a specified frame value. The frame value I used for this morph was 100 frames. The result?

DPaint managed to squeeze out its morph in 30 minutes. *Brilliance* on the other hand took a staggering 2 hours to complete. On top of the two hours was time waiting for the program to go back through each frame, after pasting the animbrush, to perform its little lag time operation when a brush is pasted.

The next morph I tried was between two small fish brushes over 30 frames. This time the comparison was closer but *Dpaint* still managed to morph it to the finish. As well as being quicker, *DPaint*'s morphing quality was noticeably superior.

Final roundup

Although the morphing speed of *Brilliance* was disappointing, I am very impressed by the overall performance. *Deluxe Paint* brings with it a lot of history and a lot of development. For a newcomer, *Brilliance* is definitely a match for *DPaint* and has provided an amazing array of new features.

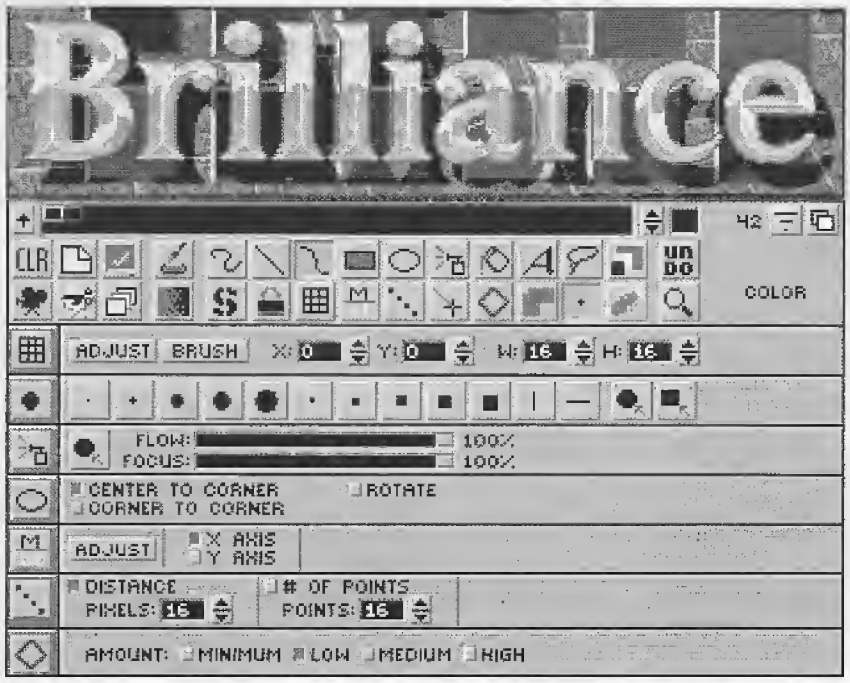
The program layout slaughters the competition. *DPaint* is a very complex and weighty program. The manual is very intense and is in fact too thorough for the average user.

Brilliance provides all the important painting and animation features of *DPaint* in a leaner, more professional program. Its manual relies on a reference section to access the information and a set of easy to operate tutorials, because the program itself is easy to use. The tutorials cover just about everything needed to freely operate *Brilliance*.

I have owned *DPaint* for many years and still I am unable to use it fully. After just one day on *Brilliance* I felt I had almost learnt the entire program. From now on *Brilliance* gets my first pick of the mouse pointer.

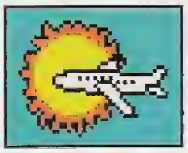
Our review copy was supplied by GSoft. For more information call (08) 254 2261. RRP is $265, comparable with *Deluxe Paint AGA*. ❑

The airbrushing offers many more options than Deluxe Paint



Hoopy Paint

Makes an artist of everyone



by Andrew Farrell

Is your favourite paint program stifling your imagination? Do your friends have trouble understanding why you bother struggling with the obscure tool icons and clumsy pull-down menus? Better still, do you have kids?

Congratulations, you qualify to own *Hoopy Paint*, the friendliest, most fun-packed program to surface since the birth of home computing. And it is guaranteed to bring out the Pro Hart in all of us.

Hoopy Paint is very easy to use. Bethany, my two-year-old daughter, directed me through the menus with ease. Every click of the mouse produced a wacky sound and before long we were ready to slap up our first masterpiece. You can start from a white canvas, or load up one of the 80 ready-to-paint scenes.

For beginners, it is simply a matter of choosing a shape from the dozens of built-in brushes and stamping it down on the canvas. Fresh from the finger painted butchers paper hanging on the fridge, *Hoopy Paint*'s shape library includes people, clouds, flowers, stars, castle wall pieces, trees, a sun and the moon.

Ask the nearest five-year-old to name an object and there is probably one on file ready to place in your own masterpiece. A selection of more traditional geometric shapes are included for advanced users, along with the usual paint tools, palette selector and flood fill facility.

If you make a mistake, one click on the OOPS! button and with an accompanying sneeze sound your errant ways are reversed. Eighteen funny brushes, each with a matching funny sound effect, can also be used to spice up your creation. Why, there is Curly Wurly, Drippy Pen, Rainbow Brush, Magic Wand, Jack Hammer and Spiral Brush for starters. Each produces some zany effect to alter your painting in an unexpected but entertaining fashion.

If all the wacky options do not spark a creative rush, or the canvas is looking a little cluttered with *Hoopy* doodlings, try the Ping Pong Bat gadget. In true *Hoopy* style, your image is now converted into the classic computer game that rocketed the Atari to fame - *Pong*. With a little persistance it is possible to ping pong away all those poorly directed brush strokes and start afresh.

For more delicate modification I suggest the Eraser tool, complete with eraser sound of course. *Hoopy Paint* has many fun things to hoot around with. The Mystery Eraser reveals a hidden image, Calendar makes creating your own custom calendars a snack and Jigsaw Puzzle shuffles the canvas into a puzzle for you to solve.

Proud artists will love the frame option, which places your painting in a picture frame complete with clapping audience sound. You can easily load and save images and there is even a print option. For $29.95, you would be hard pressed to find a program likely to cause more laughter in the family study. *Hoopy Paint* comes top of my recommended list. Check out your local Amiga store or call Azyph Software on (02) 484 3489. ❑

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Wildlife Report

The Tiger

Large striped cat of Asian jungle and mountain regions. One of the largest of the big cats, the tiger is 2-4 m. (10-13 ft) long, including a tail 1 m. (3 ft) long, and weighs 227-272 kg. (500-600 lb.). Both sexes are immensely strong, enabling them to bring down and overcome animals the size of buffaloes. Their main prey is deer, antelope, wild pigs and bushbucks.

Tigers spend the day sleeping or resting and emerge at dusk to hunt. Males are usually solitary animals, except during the breeding season. Each male marks off a territory of from 65-650 sq. km. (25 sq. miles), which contains several females and which he defends against other males, marking the boundaries by spraying a mixture of both his urine and scent.

Lacking the stamina for a prolonged chase, tigers rely on their striped markings to conceal their movements as they silently creep up on their victims before making a rush from behind. They kill by first knocking the animal down with a blow of the forepaw, or pulling it down with the claws, then suffocating it with a powerful bite at the neck or throat. Tigers swallow meat in large chunks, using their teeth to cut rather than to chew, and eating up to 22.5 kg. (50 lb.) of meat in a single meal.

Tigers once ranged all the way from China to Turkey, but today their range is largely confined to India and Indo-East Asia, with smaller populations in China, Siberia and Turkestan.

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Amiga on the Cheap

Computing isn't exactly a cheap hobby. Even a low-end Amiga system will set you back at least a grand. Luckily, there are legal ways around this problem, says John Pospisil.

At a Sheriff's Office auction recently, a friend bought an Amiga 2000 - including a 2630 accelerator card with a 25 Mhz 68030 cpu, five megabytes of memory, 52 megabyte hard drive, 1084s monitor, Kickstart 2.0 and 1.3, two floppy drives and a Colorado tape back-up unit - for $500.

At the same auction, a $4000 flatbed scanner went for $300.

It is possible to get good computer gear at an even better price. There are a few reasons that this is so.

First, Amigas use standard serial, parallel and SCSI interfaces to connect to peripherals. The newer Amigas also use IDE hard drives. It just so happens that IBM compatibles and Macintoshes use the same standard connections. There are so many of these machines around, that as a result, there is a lot of Amiga-compatible equipment around.

Second, Amigas have been around since 1985. Many of the older Amigas have found their way to the second-hand market.

Third, computers, like any other mass consumable in our consumer society, quickly become obsolete and loose their value. There's a lot of perfectly usable equipment out there that just isn't worth much because it's not the latest and the greatest.

Where do you get it?

If you look in the classifieds of your local paper, you might find a cheap computer, but probably not. You'll still see people trying to sell Commodore 64s for $1000, and Amigas for much more. Unless you're exceptionally lucky, this isn't where you'll find real bargains.

There are a few different ways of finding cheap computer equipment: auctions, trash and treasure markets, garage sales and computer markets. In all these places, usable and working computer gear is often sold cheaply either because sellers don't know the real value of their goods, or they know but just want to get rid of it.

Despite the bargains, items can still be over-priced at these places.

You can find the greatest computer bargains at auctions, but you can also be grossly ripped off. It's great when you're the only one that is interested in that near-new laser printer; it's bad when so is everyone else, and the winning bid is close to what you'd pay brand new.

At the sheriff's office auction mentioned above, most people were there to buy videos and TVs. The Amiga 2000 was sitting in the corner unnoticed and unwanted. My friend got the bargain of a life-time.

Finding computer equipment at such general auctions is unusual; you'll find much more computer gear at specific computer auctions.

Mason-Gray-Strange auctions in Sydney hold such an auction every two weeks. The auction I attended had everything from Macintoshes to hard drives to laser printers. Prices varied, but on the whole were very reasonable.

A Sony external CD rom unit sold for $125. NEC multi-sync monitors went for $225. Laser printers went for about $400. Hard drives, including IDE and SCSI units, ranged from $10 for 20 megabyte units to $160 for 80 megabyte units.

Most auctions require that you register if you want to bid. This doesn't cost anything. Most auctions also require that you pay at least 25% on the fall of the hammer if your bid wins.

Incidentally, you can find the time and place of the Sydney auctions in section one of Saturday's *Sydney Morning Herald.*

Markets

Trash and Treasure markets are another hunting ground for cheap computer gear. They're found in most areas and usually held in car parks.

Don't expect to find something every week, though I have found a few bargains: a Microline 182 printer for $25; a 1200 baud modem for $8; and Commodore 64s ranging from $15 for a working keyboard to $70 for a complete set-up including: monitor, disk drive, computer and printer.

Not all computer gear at Trash and Treasure markets is that cheap. Over the past few years, second-hand dealers have moved into Trash and Treasure markets, wanting ridiculous prices for what is often useless. Anyone want a Vic 20 keyboard for $100?

Get to the markets as early as possible. You'll often find that by 8am (yes folks, that early) everything half decent is already gone.

If you like early starts, you might try garage sales and fetes. It's possible to find odd bits of equipment at these neighbourhood events, though don't expect too much. Again, try to get there as early as possible - if not before opening time. This isn't as extreme as it sounds. Second-hand dealers often wake up people running garage sales at 5.30am, just to be the first in. I'm not suggesting you do this, just trying to give you an idea of what you're up against.

Over the last few years computer markets have sprung up. The Sydney Computer Market is probably one of the best. (Melbourne also has an excellent market held fortnightly). I picked up MegaMix audio sound digitiser and *DigiView 3* for $20. It's usually held about once a month. It's been held all over the place including the Horden Pavilion, the Homebush Stadium, the Sydney Town Hall and Matraville High School.

They usually advertise in the computer section of the *Weekly Trading Post* (published in Sydney).

What to pay

Don't forget that you can haggle over prices everywhere except for auctions. In fact, at Trash and Treasure markets, it's almost expected of you.

When you buy second-hand computer gear you must know the value of the equipment. The example I gave about the Vic 20 keyboard for $100 occurred at a Trash-and-Treasure market in Canberra. The seller involved thought it was a great bargain at only a hundred dollars. A few stalls on, a Commodore 64 and tape drive was selling for $15. Always know the value of what you're buying. Don't let your excitement carry you away.

This is especially important at auctions. Often the pressure of competing against other bidders pushes the price way beyond a realistic level.

Buying second-hand computer gear is usually at the buyer's risk. Sure the seller might say that it works, but as you and I know, this is no guarantee. And yes, though I hate to admit it, I have been burnt too.

Remember, just because something looks good on the outside, doesn't mean that the inside hasn't suffered a melt down. Similarly, just because something looks a little rough, doesn't mean it doesn't work.

If the seller says that a certain piece of equipment works, ask that person for identification, such as a driver's licence, and a receipt. It's amazing how quickly after asking this, some sellers remember that they haven't tried it out for a while and maybe it might not work. What's more, you'll probably get it for a good deal cheaper.

Above all, don't take buying second-hand too seriously, and you'll have lots of fun. ❑

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A Video Tutorial

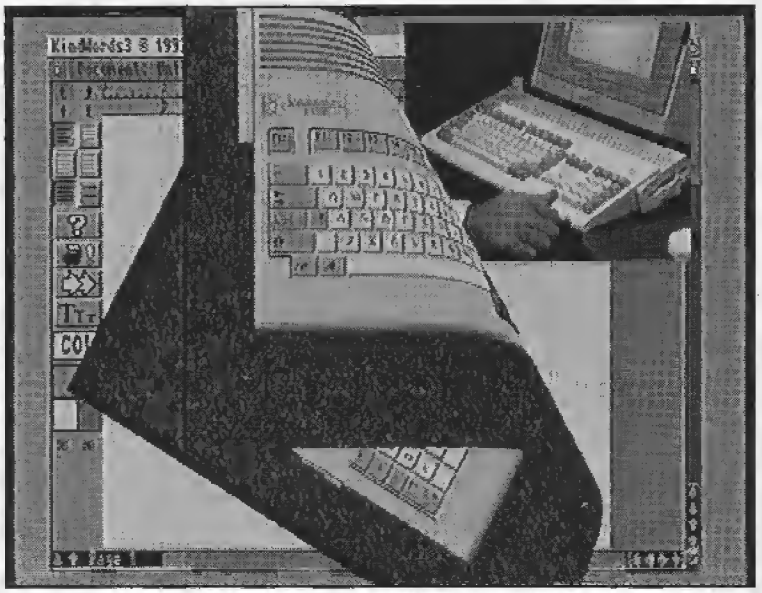
by George Kimpton

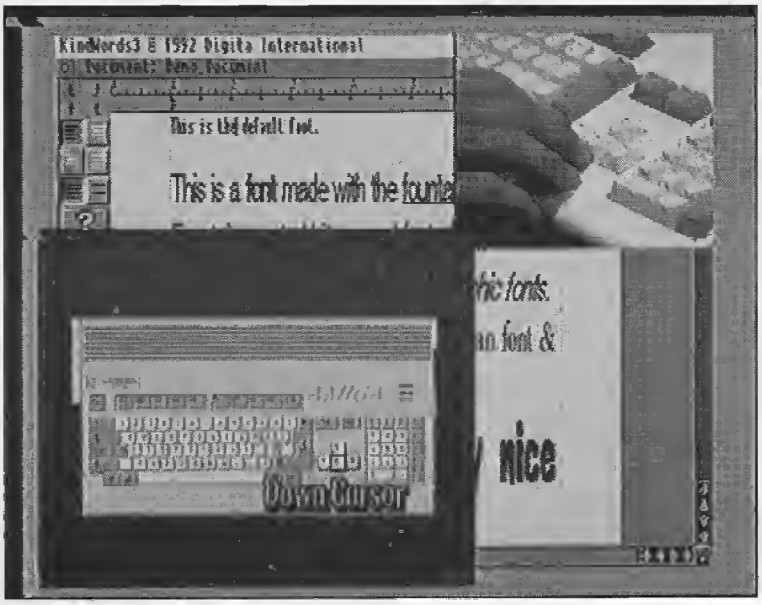
It doesn't matter how much information you provide in manuals, most people just don't seem to want to read them. Either that or they cannot understand the terminology and need help.

There are of course Amiga users like myself who offer tuition, but people still need something visual that they can refer to at their leisure. Greg Wall of Wall Street Video has attempted to address this need with the first of a planned series of training videos.

The one hour video, "An Introduction to the Amiga 1200, Basics Tutorial, Volume 1" specifically discusses the 1200. It could however be used by most Amiga purchasers, especially those using Workbench 2.

In this first tape the only differences for users of other Amiga models would apply to the location of some external connectors and the version of Workbench used. These minor differences are usually well covered in the manuals supplied with the computer.





Experienced voice

A great deal of thought has gone into the content, probably because Greg draws on his own experiences tutoring beginners. It starts from scratch, describing the keyboard and all the external features and connectors and their uses. This is done in such a way that there can be no confusion even by the most computer illiterate.

The PCMCIA slot, internal memory expansion and mouse cleaning are discussed before moving on to the Workbench screen itself. Here menus, windows, icons, buttons and scroll bars etc and their uses are discussed in detail. From there it moves on to formatting and copying floppies and then on to hard disks where partitions are discussed.

The viewer is next led through the intricacies of installing programs, but you'll have to wait until the next tape in the series to learn how to use assigns in the startup se-

quence. This is a pity, as with some programs, if that all important assign is not in place, the Amiga can drive you mad with repeated requests for the original disks.

The moving and handling of files, along with the creation and use of drawers, is the next subject to be covered. New features of Workbench 2.0+ and the 1200 - pseudo icons, marque selection of icons, snapshoting of screens and windows and organising the hard disk - are next for attention.

Throughout the video the traps that snare most novices are carefully explained. The use of picture in picture and other production techniques to illustrate points should leave no doubt in the viewer's mind about the subject being discussed.

While the production lacks polish at times, this tape is very easy to follow, with excellent coverage of the basics making it easy for the beginner to get started. It does have a decided advantage over live tutors because if you don't follow some particular point, you can replay it at your leisure. $65 may seem a little expensive but consider the cost of a live tutor.

The next tape in the series will cover loading and saving files, setting up your printer, keyboard shortcuts, Hard Disk backup, customising the workbench and Shells and assigns. It is a pity that this second tape is not available yet as these subjects are vital to really getting the best out of your Amiga. Check your local Amiga reseller for a copy or call (02) 411 2108. RRP $65.00. ❑

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CED 3.5

Text Editing for Rev Heads

by Daniel Rutter

A text editor is to a word processor as a Formula 1 car is to a Mercedes; more specialised, but far better for its particular job. Text editors don't handle graphics, fancy fonts or any of the other document frills; their aim is to quickly and powerfully manipulate raw text, full stop. They are used mainly by programmers and BBS operators.

There are lots of non-commercial Amiga text editors, and many are very good indeed, but to get a really slick, well documented and, importantly, widely supported program you have to go commercial. The two choices you're thus left with are Oxxi's *TurboText*, which hasn't been updated for a while yet but is perfectly good as is, and ASDG's *CygnusEd Professional*, which has recently hit v3.5 with considerable modifications.

The thing about high powered text editors is that they tend to be chameleons. Both *CygnusEd*, or CED as it's universally referred to, and *TurboText* are so configurable that it's possible to turn either into a functional clone of the other, or of any other editor you can think of.

So the most important point ends up being the central core of the program; the bits you can't change. Here, now, CED is in front.

Operation

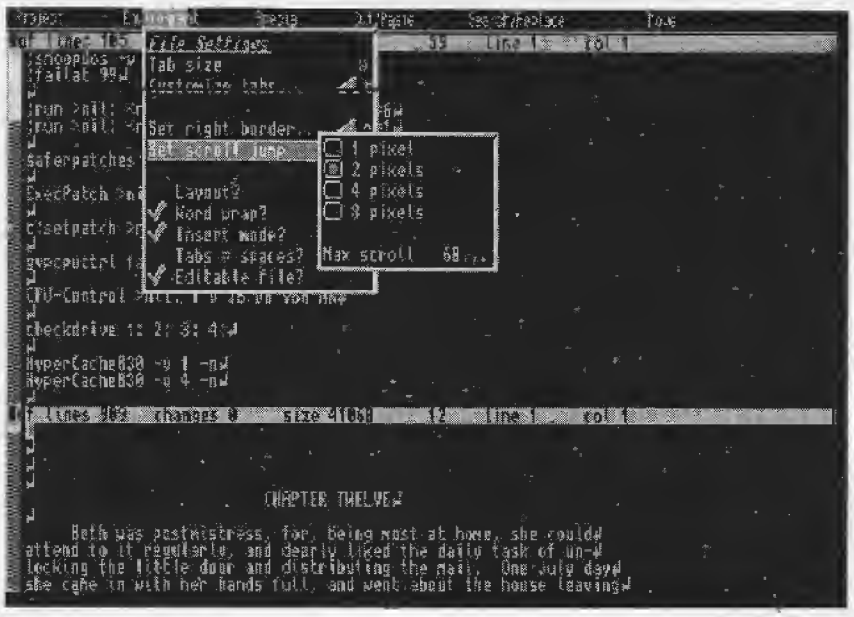
CED has always looked slicker than *TurboText*. For a start, it has Sexy Scrolling. Scrolling text moves pixel by pixel, not line by line, and glides to a halt when stopped. If a computer doesn't have a text mode, after all, why pretend it does by choking it back? CED uses a slightly illegal triple-menu under one name for its Environment settings, too, which I suspect is just there so nobody can make a screen that looks just like it. But all was not sweetness and light with earlier versions of CED.

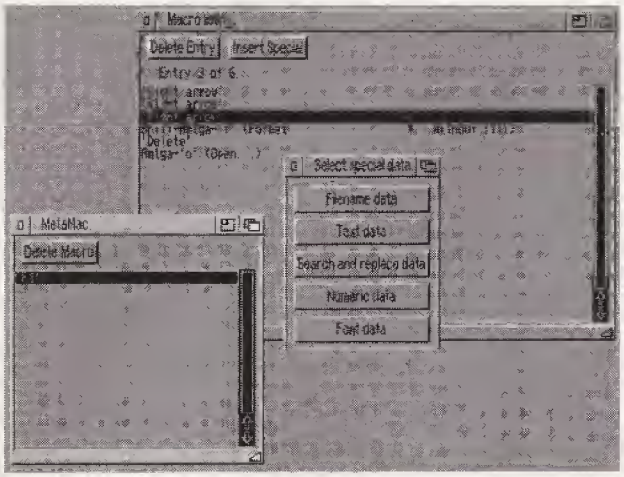
One of the most annoying things about CED for power users was that its macro handling was lousy. While you can run the whole of CED from a macro and they let you attach amazingly complex operations to a single keystroke, on older CED versions you could only record macros sequentially, and editing them was hugely irritating. You basically had to scrap the whole thing and do it again, which made big macros way more trouble than they were worth.

CED's macro editing has been vastly improved by the introduction of the MetaMac program, which lets you view macros as a list and effortlessly record, delete and edit anywhere you want. This single feature is the one that's had CED users really raving, but it's by no means where the changes end.

CED now supports the Clipboard; text cut from CED can be pasted to any other Clipboard-supporting application and vice versa. There's a search and replace history, so you don't have to retype 362 character search strings every time you want them. CED will now open as one or more windows on Workbench or any other public screen if you want, cutting down the profusion of chip RAM eating screens that plagues heavy multitaskers.

Up to 30 views can be open at once, if you've got room from them. The previous maximum was 10. As before, any of these views can be of a separate file or a different bit of an already open file, so coders with gigantic source files can look at lots of bits at once without scouting back and forth.





The MetaMac macro editor

Problems

One thing that ticked me off about the old CED was that it couldn't handle lines over 1024 characters long. This is not a very remarkable number of characters to get without a return in there somewhere, and so CED could easily stuff up on all sorts of files, making it necessary for the long-suffering user to preprocess text before editing. The problem's not been cured, but it's certainly been reduced now that CED handles 4000 character lines. Personally, I'd prefer automatic handling of lines any length - PD editors can do it - but nobody's perfect.

CED's actuator program, Ed, now accepts standard wildcards. Myself, I'd never noticed it didn't, since I use Csh as my shell of choice and it parses UNIX-style wildcards into standard command lines, but it's nice to know vanilla DOS users are now catered for.

Find Matching Bracket, the useful feature to make sure every bracket has a mate and find the danged thing, now accepts C style delimiters as well as the usual ([{}]) stuff. Small, but useful.

There are more ARexx commands, and the manual's been greatly improved so ARexx users won't be left with that blind man in a landmine factory feeling. One of the new Rexx commands lets you display custom text in screen or window title bars; useful for keeping track of your creations' activities.

The whole manual's been revamped, not just the ARexx section. It's now easier for expert users to find what they're looking for, without the manual reading like a NATO specification sheet.

Overall, CED 3.5 is not a massive change, but neither is it just a tweak. The upgrade is well worth the money, and CED is now the best value Amiga editor out. Get it. It's good.

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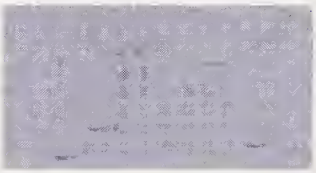

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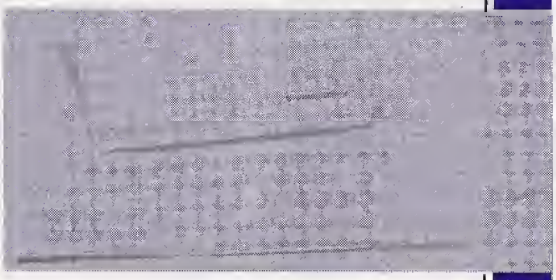

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Hints & Tips

Many customers ask me about maths coprocessors. It seems that there are a lot of misconceptions out there about what they actually do! Many incorrectly assume that a maths coprocessor works like an accelerator, speeding up everything. The truth is that only a very small proportion of software will be improved with the addition of an FPU (Floating Point Unit - another name for a maths copro.). Only software written to make use of an FPU will benefit, and this typically includes "mathematically intense" applications such as ray-tracing and rendering software. The FPU actually performs the necessary operations on floating point quantities (numbers with a fractional part), allowing the CPU to do other things. However, software which does not make use of the FPU will not be affected.

The Amiga 1200 has space for a maths coprocessor on the motherboard, but has never been shipped with one (at least in Australia). Thus many RAM expansions offer the option of an FPU. Typically the FPU adds around $100 to the price so think carefully before buying! The FPU can always be added later, providing the board has a socket for one (and all that I've seen do). The Amiga 4000/030 version also never ships with an FPU, but on all late revisions a socket is provided. The 68040 has its FPU built into the CPU.

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The FRAMEMACHINE

Desktop video marches on

by Andrew Farrell

Electronic Designís Frame Machine delivers know-how from one of the strongest Amiga markets in the world.

When the FrameMachine was launched in Australia some time back, there were promises that we could look forward to recording video to hard disk at impressive frame rates in full 24-bit colour. Indeed, the FrameMachine can capture a single 24-bit image in almost no time at all. And with the add-on Prism module included on our review unit, you can see the image in all its original splendour.

However, despite our best efforts with some of the fastest Amigas around, we were not able to achieve frame rates which even approached those hinted at by some sources.

Originally the FrameMachine plus Prism24 module was around $2,000, and since it failed to do one of the main functions promoted by the local distributor at the time, we were hesitant to review it.

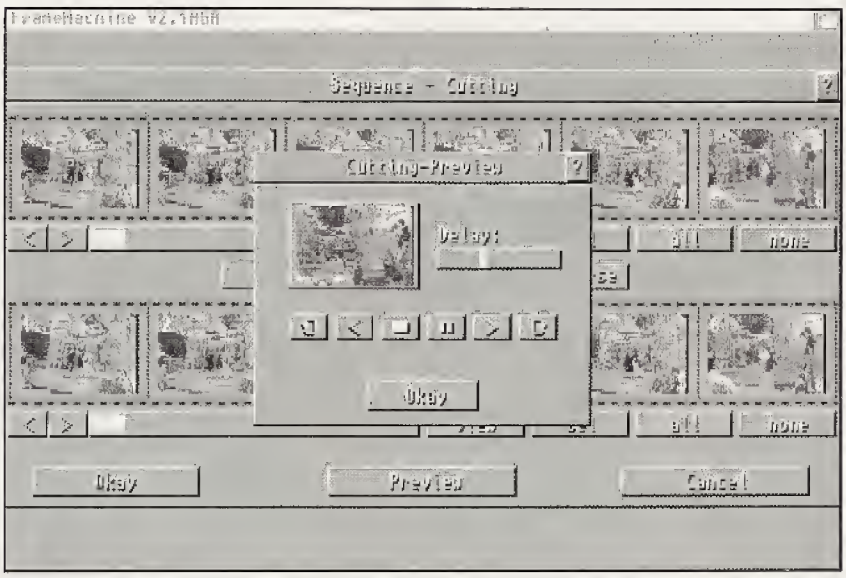
Well, Electronic Design now distribute the product directly. Not surprisingly, the FrameMachine is also now considerably cheaper. A combination of the price drop, latest AGA versions of the software, and news that *TV Paint* was about to be released for the board, gave us renewed impetus to check it out once more. What we found was more than a frame grabber.

Installation

The FrameMachine is a full size Zorro card, in fact it could be said to be slightly oversized. The plug in Prism module makes it very wide - I suggest allowing two slots in an A2000 - a problem if you're already short on space. However, my biggest complaint is the length. Getting the board in and out required a great deal of earnest coercion, with the constant fear something would break.

In the A3000 and A4000, where the card connects with the video slot as well the Zorro slot, the problem is intensified by the tight fit of the connectors. On the A2000, you need to install a daughter board under the Denise chip - so installation requires a good deal of fussing with your system.

We actually experienced some dif-



ficulty when running with a GVP accelerator - it appears the FrameMachine may have some compatibility problems here.

At the back of the card there's Y/C and Composite video inputs, an RGB out and Feature Connector, which at this time remains unused.

Software

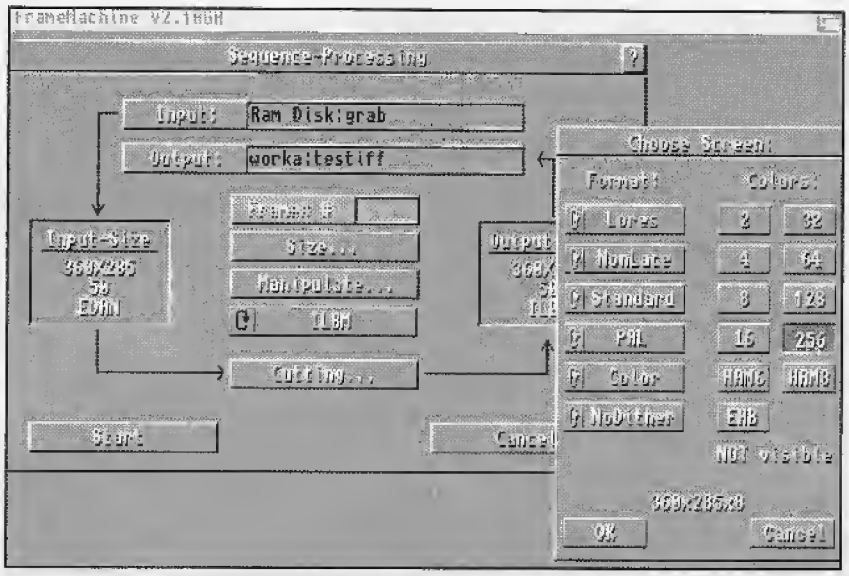
Throughout the testing period we received numerous updates to the suite of software included with the FrameMachine. Various bugs were sorted out and AGA support added. Just before press time, Electronic Design announced a version of *TV Paint* would soon ship for the board. It's a crying shame they didn't have a good paint program before now, as I'm sure with that the whole solution would have been a lot more popular earlier on.

The unit ships now with an *AdPro* and *Imagemaster* loader, stand-alone frame capture software, as well as play and show utilities. There's good AREXX support and a simple picture-in-picture control program.

Frame grabber

A full preview of the source video is provided as a 16 grey scale 25 frames per second display on the standard Amiga monitor. With the Prism24 connected, you'll see a full true-colour preview. Because FrameMachine connects directly to the Zorro bus, once you've captured a frame, the only time delay is converting it to the display format you wish to view it in. You can also capture to disk complete segments of video. But here's the catch. Full 25 frame per second video digitising is only possible in black and white, non-interlaced, lo-res. At the opposite end of the scale, you can grab 24-bit at 180 x 128 at 25 images per second.

In day to day use, I found little practical value for either of these formats, although it's possible to cut and paste the captured segments with ease. Simply put, the board offers a high trade off between quality and speed. You



can have one or the other, but not both.

Somewhere in between, and with a little help from dithering, I recorded 180 x 256 pixel frames in 16 greys at around 15-20 frames per second that looked quite impressive. Perhaps some multimedia presentations or even games could make use of this.

Prism24

With the Prism24 module in place, video can be previewed in full 24-bit when an RGB monitor is connected to the Prism's video port. A second monitor can be used to continue to view the Amiga's normal RGB by itself. Now here is an interesting application for the FrameMachine in desktop video.

Feed one source into the Frame Machine. Feed the second into your genlock as the sync. With the Frame

Machine's RGB-out driving the genlock, you can now dissolve between two video sources. Pretty neat considering the cost of a mixer to do the same job would be several thousand dollars.

Now, using the same configuration, fire up the PTV utility for picture-in-picture. This is a true scaled down view of the inbound video. Apart from watching TV while you work, there's some real world applications for this one.

You can do a segment like those found in many news and current affairs programs where a video sequence you're about to cut to is visible in a small box to one side of the presenter. Unfortunately, the Frame Machine is not stable enough to move or resize the picture-in-picture box on the fly without noticeable disturbance of the signal.

Prism video processing

If you do a little video editing, you'll know how disappointing it can be to find that one special moment has been ruined by wrong white balance settings. Using the Prism24 preference utility, these sorts of problems can be correct along with a number of special effects achieved. By feeding

video through the Prism you can adjust brightness, saturation, contrast and the red, green and blue content of the signal.

Although the Amiga video can be overlaid on the digitised stream, there's no way to dissolve the key up and down. There's also no way to easily hot key the graphics on the fly - it's all down using a pop up utility. Not much use when you're trying to title something.

From within the main FrameMachine software there's a neat special effects option. When I first noticed the menu option, I had visions of a much older card which performed various real time effects on digitised video. alas, in this case Electronic Design have seen fit to grant us a single interesting, but fairly useless effect which turns the chrominance on end. Fine for music clips, but not much else.

Conclusions

The Frame Machine is very close to being an incredible card. However, it is lacking in two areas. The missing paint program - a problem which sounds like it may have been solved - is my biggest beef. The second is the way the device seems hopelessly under-exploited.

It's almost a good way to record video to disk, almost good for video effects, almost useful as a genlock. But for simple and seemingly silly reasons these things fall short. The frame rates are too low, there's no way to dissolve the keyed Amiga graphics, and the obvious possibilities of special effects are few and awkward.

What this board desperately needs is a single button based interface which consolidates the functions useful for desktop video. The options should include various digital video effects, the frame store, graphics key (with dissolve), picture-in-picture - things which are all functionally there, but just too spread out to be quickly, easily and usefully included in a live production situation.

Despite these shortcomings, the FrameMachine is excellent value for money, and with the right paint program, may well turn out to be a viable and available alternative to the Opal Vision card for which we all await the promised add on modules. Electronic Design would also do well to ensure appropriate support is available from leading multimedia products such as *Scala*.

For more information contact your nearest Electronic Design agent. A complete list appears on their advertisement on the outside back cover of this magazine.

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Personal Tutor

by Stan Nirenberg

The last two years of school are considered to be the most important in any young person's life. Decisions must be made about a career, whether to continue on to tertiary education, take up a technical or business course or attempt to enter the workforce.

A major factor in this decision, particularly if tertiary studies are contemplated, is the standard of results that are obtained in the last year of secondary school. This is not only a function of ability, but also motivation, how study time is structured and the student's ability to make the best use of the resources that are available.

Many students avail themselves of additional assistance in the form of a tutor. Tutors can help in explaining the material studied at school to improve the student's understanding. A tutor can also help in discussing issues and problems, revising material and preparing for exams.

Another (possibly complementary) resource is available in the form of *Personal Tutor*, a computer based training tool. It can help reinforce what you have learned at school, test your knowledge of the subject with a structured series of tests and help to prepare you for exams.

Installation

Personal Tutor comes in a video cassette style plastic box. Inside is a set of floppy disks comprising the program disk, a number of data disks - a different colour for each subject - and a yellow student disk. The student disk is used not only for copy protection (it must be inserted into the floppy drive for the program to work) but to keep track of the student's progress. A comprehensive installation and user guide is included.

The program runs on any Amiga (500 or higher) with 1MByte of RAM and operating under Workbench 1.3 and above. The program can be operated from floppy disks (use of backup copies is recommended) or from the hard drive. Installation onto a hard drive is simply carried out using the supplied utility and following the instructions in the manual. Hard disk installation requires about 1.2MByte of space per subject. An additional utility is provided to allow backup of the student disk to be made.

Full instructions for navigating around are supplied along with information on how to obtain the best results from its use. The first time the program is used, it takes the student on a full tutorial just in case the manual has not been perused with sufficient care.

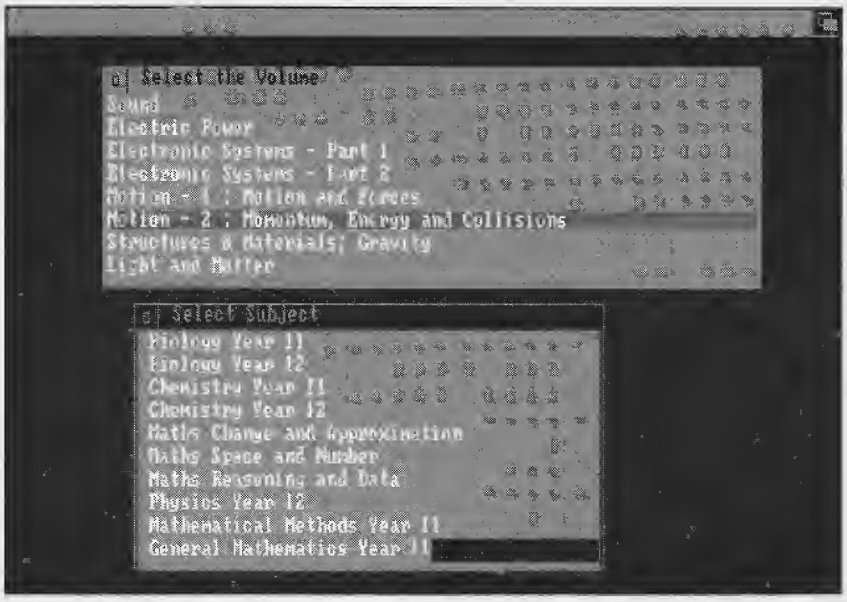
Running and using the software is extremely easy. The Personal Tutor icon is double clicked to start the program and the mouse can be used to select all menu options, but the keyboard is required to answer the quiz questions posed by the program.

Up and running

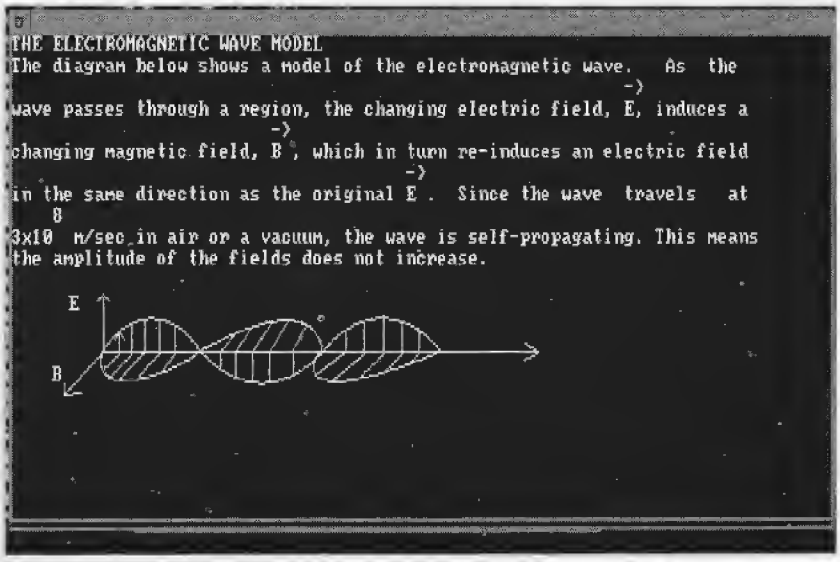
The *Tutor* is structured in a hierarchical way to allow the student to study and revise lessons that correspond to those taught at school. In fact, the recommended approach is to use *Personal Tutor* to revise work that had been covered that day at school. Alternatively, *Personal Tutor* can be used for revision and exam preparation.

Each subject is subdivided into a a number of units, each unit into a number of chapters, sections and finally into a number of lessons. The student is given a choice whether to let the program select the order in which to present the lessons (the recommended approach) or to manually choose a particular lesson to study.

At the start of each lesson a short tutorial of relevant material is presented, followed by a series of multiple choice and true or false questions. Note that the tutorial can be disabled if desired. Before answering each question, information about the relevant principles of the subject are displayed and clues to help



FACT FILE
Publisher: Memory Banks
RRP: $150
Comments: A useful resource for students undertaking Year 11 and 12 subjects
Age Group: Year 11 and 12



answer the question are provided. *Personal Tutor* acknowledges if the right answer is given but indicates what the correct answer should have been otherwise.

Questions where incorrect answers were given are presented again until the student understands the topic well. The questions that were previously answered incorrectly are repeated, this time without the help (unless requested) of the tutorial or clues. To ensure that the student does not resort to guessing, the order of answers is randomly jumbled. Finally, statistics about the student's performance are given.

The approach used by *Personal Tutor* is to reinforce lessons as they are learned at school and to repeat the material until the lesson is fully understood. In addition, there is a consolidation facility to keep the student in touch with what has been learnt previously.

In this mode the tutorials, principles and clues are only displayed on demand. An auto revise function keeps track of the lessons at which the student performed below standard so that they can be revised at a later stage. A "knowl

→ page 36

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Summary

Personal Tutor will prove to be a valuable aid to those in their last two years of secondary education. The package will assist students in reinforcing and revising the material taught in school, in consolidating this material and in highlighting the student's areas of weakness so that remedial action can be taken.

A degree of discipline is required to use the package. This is not to say that the software is difficult to use, rather, to get best results requires that the student regularly goes through the lessons, exercises, tests and so on. But then, like anything else, study itself requires a disciplined approach in order to achieve the desired results.

Personal Tutor can certainly help in this regard and I have little doubt that the majority of users will benefit from its use. However, this program should be only one of a number of tools in any student's armoury. Every means available needs to be used to attain good results and may include talking with teachers, parents and peers, making use of libraries and perhaps even hiring a tutor for those that can afford it.

Alternatives

Personal Tutor is published by Memory Banks (03) 770 1615 in Australia and is available from software and educational suppliers and direct from the publisher. A demo disk is available on request from Memory Banks. The package reviewed here (VCE Physics) sells for around $150 per subject. Other subjects range in price from $75 to $325, with most one year subjects retailing at $150 and two year subjects for $250. The programs are specifically tailored for State curriculums and the following are available:

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In addition, Memory Banks have just released the Get Smart series. These are single unit extracts from *Personal Tutor* and are ideal for brushing up on specific aspects of the curriculum. Get Smart is available at a recommended retail price of $49.95 each.

Wrap up

Personal Tutor is certainly not a cheap package. However, it is the only package available that has been specifically tailored to meet the needs of Australian year 11 and 12 students. In the competitive times that we live in, we should avail ourselves of every means to do well. *Personal Tutor* can be a useful asset for those in the last two years of secondary school.

Correspondence

As usual, please write in with your comments, questions, etc to me care of ACAR or directly to PO Box 136, Forest Hill, Vic 3131. ❑

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Blitz 'em

More about adding commands

by Roy Hurley

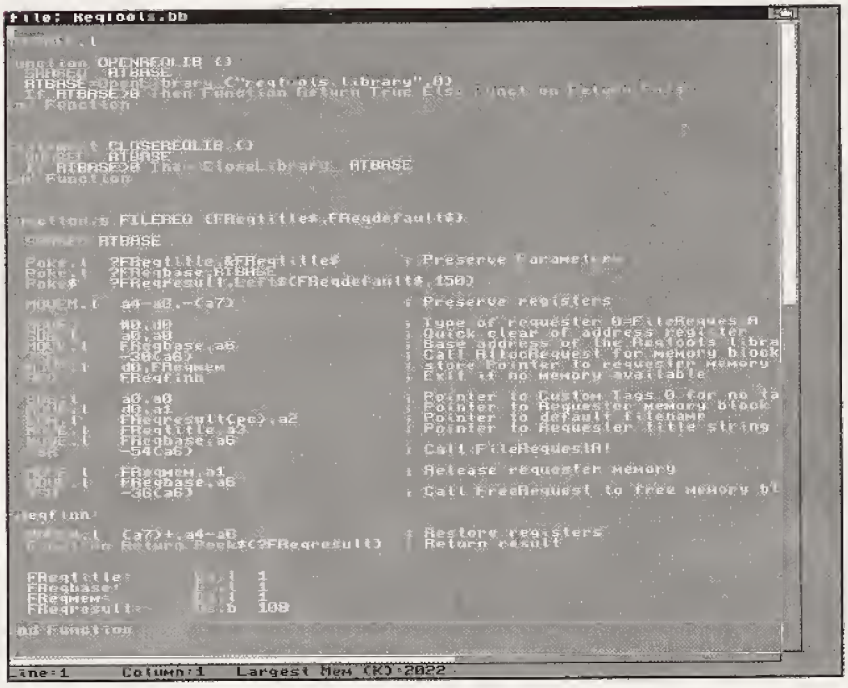
Following on from last month's column, this issue we continue looking at adding extra commands to the Blitz II command set. As promised, we're covering the Reqtools library and adding two very useful functions to our growing Includes directory, the File requester and the simple user requester.

The Reqtools library is readily available from most BBSs, and since 56% of Blitz owners have a modem, that leaves the other 44% to get it from a PD supplier, or a friend with a modem.

The Reqtools library is a standard, shared Amiga run-time library, written by the Belgian programmer, Nico Francois. The purpose of the library is to provide ready built, professional looking requesters that are easily accessible to the average programmer.

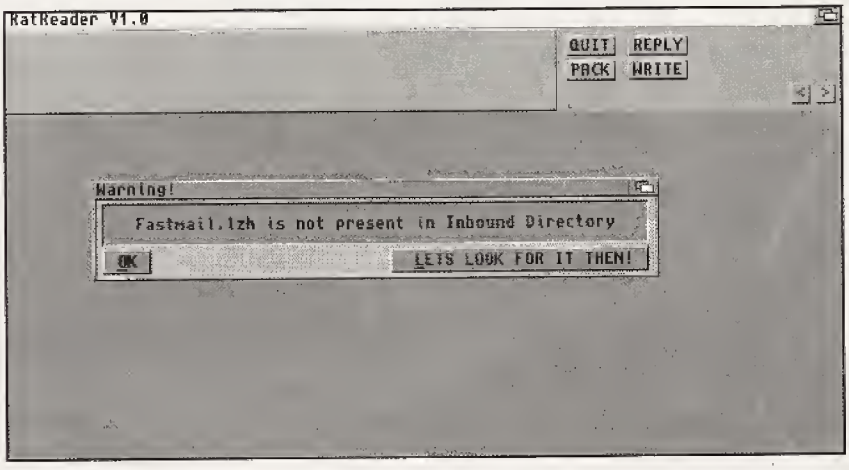
This leads to an attractive and powerful standard in requesters, and it relieves the programmer of the burdensome and tedious work involved in intuition programming, reinventing the wheel.

The library contains many requesters. The first of the two we will be looking at will be the file requester, used for prompting the user for a file. The second is the user requester, which is used to ask the user to make a simple decision, or to alert them to some important information.



The Blitz II Workbench

The Reqtools requester in action



Housekeeping

The first two functions we need are housekeeping functions. Like any library on the Amiga, it must be opened

continued on page 42

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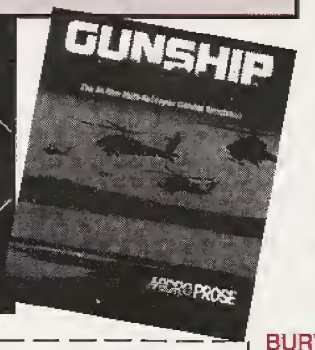

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before it can be used. Our function OPENREQLIB {} calls the Exec function OpenLibrary(Libname,version) to open the library, then returns zero if the attempt failed, or a pointer to the Reqtools library base, which we store in the shared variable RTBASE.

The Reqtools library must be present in the Boot disks LIBS: directory for this to succeed. Exec will load the library into memory. It's important to always check for failure when calling external functions whilst programming on the Amiga, and take the appropriate action.

When we have finished using the Reqtools library, usually at the exit routine of your program, it is polite to close the library, and return the memory and resources back to the operating system. This is easily done with a call to Execs CloseLibrary(Libase). Don't forget that the library you are actually attempting to close has been opened by your program, otherwise a visit from the Guru is certain! Our function checks that RTBASE is not zero, proving that Reqtools.library is open.

Here are the two functions. Notice that there are no parameters passed to them, although Blitz still requires empty parsing brackets.

```
Function OPENREQLIB {}
   SHARED  RTBASE
   RTBASE=OpenLibrary_("reqtools.library",0)
   If RTBASE>0 Then Function Return True Else Function Return False
End Function

Statement CLOSEREQLIB {}
   SHARED  RTBASE
   If RTBASE>0 Then CloseLibrary_ RTBASE
End Function
```

Now on to our two more complicated Reqtools functions. The first is FILEREQ {Title$,default$} which calls a file requester for the user to select a file. The programmer passes the requester's title string, and a default file selection which will be returned if the user simply selects OK without selecting a file. If you don't want either, just pass a null string.

The function is mostly machine language and sets up all the information before making the call to the Reqtools function FileRequestA.

First, pointers to the programmer's parameters are stored before calling Reqtool's own specialist AllocRequest routine which allocates the memory and the resources required for the request type passed in d0. This pointer is stored and checked for a zero, which would indicate a failure of the system to allocate our needed memory.

Notice how we use Move.l d0,FReqmem to store the pointer before testing for failure. This is vital, as the System programmer's guide stresses that the status register does not necessarily reflect the result when returning from a system function. After executing the Move.l command, we can be sure that the status register is correctly set.

After this preparation, all that's left to do is load the address registers a0 through to a3 with pointers to our information, and call the Reqtools FileRequestA.

After the user has responded to the file requester, we initialise and call Reqtools FreeRequest function to return the system's resources. The user's result is returned in a string, looked up by a well aimed peek$().

```
Function.s FILEREQ {FReqtitle$,FReqdefault$}
   SHARED RTBASE

   Poke.l     ?FReqtitle,&FReqtitle$ ; Preserve Parameters
   Poke.l     ?FReqbase,RTBASE
   Poke$      ?FReqresult,Left$(FReqdefault$,150)
   MOVEM.l    a4-a6,-(a7)            ; Preserve registers
   MOVEQ      #0,d0                  ; Type of requester 0=FileRequestA
   SUB.l      a0,a0                  ; Quick clear of address register
   MOVE.l     FReqbase,a6            ; Base address of the Reqtools library
   JSR        -30(a6)                ; Call AllocRequest for memory block
   MOVE.l     d0,FReqmem             ; store Pointer to requester memory block
   BEQ        FReqfinn               ; Exit if no memory available
   SUB.l      a0,a0                  ; Pointer to Custom Tags 0 for no tags
   MOVE.l     d0,a1                  ; Pointer to Requester memory block
   LEA.l      FReqresult(pc),a2      ; Pointer to default filename
   MOVE.l     FReqtitle,a3           ; Pointer to Requester title string
   MOVE.l     FReqbase,a6
   JSR        -54(a6)                ; Call FileRequestA!
   MOVE.l     FReqmem,a1             ; Release requester memory
   MOVE.l     FReqbase,a6
   JSR        -36(a6)                ; Call FreeRequest to free memory block

FReqfinn:

   MOVEM.l  (a7)+,a4-a6              ; Restore registers
   Function Return Peek$(?FReqresult)  ; Return result
   FReqtitle:     Ds.l  1
   FReqbase:      Ds.l  1
   FReqmem:       Ds.l  1
   FReqresult:    Ds.b  108
End Function
```

Our second function is a call to Reqtools EZRequestA. The same preparation is required, the pointers to parameters are stored, the requester memory is allocated, and the requester called. The button selected by the user is returned in d0. The programmer can pass the function the requester title string, the text which appears in the body of the requester, and strings which appear within the buttons. You can have multiple lines in the requester text by including the ASCII 10 newline character, for example ReqText$="Line 1"+chr$(10)+"line 2" The buttons should be separated by the backslash character. Notice, also, how the hotkey character is designated by putting an underscore before the desired character.

A lot of the functions of the Reqtools library are highly user definable, and I have set up these calls to be of general purpose use to the majority of programmers. Feel free to explore the many options offered by this excellent resource. If there is enough reader demand, we will look at the other requesters available, or look more in-depth at these, and their other options.

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```
Function REQ (Reqtitle$,Reqtext$,Reqbuttons$)

   SHARED RTBASE

   Poke.l    ?Reqtags+4,&Reqtitle$ ; Preserve Parameters
   Poke.l    ?Reqtext,&Reqtext$
   Poke.l    ?Reqbuttons,&Reqbuttons$
   Poke.l    ?Reqbase,RTBASE

   MOVEM.l   a4-a6,-(a7)          ; Preserve registers
   MOVEQ     #1,d0                ; Type of requester 1=EZRequestA
   SUB.l     a0,a0
   MOVE.l    Reqbase,a6           ; Base address of the Reqtools library
   JSR       -30(a6)              ; Call AllocRequest for memory block
   MOVE.l    d0,Reqmem            ; store Pointer to requester memory block
   BEQ       Reqfinn              ; Exit if no memory available

   LEA.l     Reqtags(pc),a0       ; Pointer to custom tags
   MOVE.l    Reqtext,a1           ; Pointer to requester text
   MOVE.l    Reqbuttons,a2        ; Pointer to buttons string
   MOVE.l    d0,a3                ; Pointer to requester memory block
   SUB.l     a4,a4
   MOVE.l    Reqbase,a6
   JSR       -66(a6)              ; Call EZRequestA!
   MOVE.l    d0,Reqresult         ; Store result

   MOVE.l    Reqmem,a1            ; Release requester memory
   MOVE.l    Reqbase,a6
   JSR       -36(a6)              ; Call FreeRequest to free memory block

Reqfinn:

   MOVEM.l   (a7)+,a4-a6          ; Restore registers
   Function Return Peek.l(?Reqresult)  ; Return result

   Reqtext:     Ds.l  1
   Reqbuttons:  Ds.l  1
   Reqbase:     Ds.l  1
   Reqmem:      Ds.l  1
   Reqresult:   Ds.l  1
   Reqtags:     Dc.l  $80000014,$00000000,$80000008,"_",$80000003,$00000002,$00000000
                                                    ; Title   Pointer  Underscore  Centre
   Screen       Tag End
End Function
```

To conclude this month's tutorial we have a simple example program to show off the latest additions to our custom commands. Don't forget to include the functions listed above before this code, so Blitz can recognize our new functions.

```
DEFTYPE.l

<include functions here>

If OPENREQLIB()

   f$=FILEREQ("Pick a file, any file...","Default")
   r=REQ("Reqtools example","The file you selected was "+f$,"_YES|_MAYBE|_NO")

   Select r
      Case 0
         NPrint "Oh yes it was!"
      Case 1
         NPrint "glad you agree!"
      Case 2
         NPrint "You know I'm right..."
   End Select
   CLOSEREQLIB()
Else
   NPrint "Couldn't open Reqtools.library! Is it in your LIBS: directory?"
EndIf
MouseWait
```

That's it for this month, happy Blitz programming.

Don't forget to write in and tell me all want you want from your Blitz column, and I can always be contacted very quickly on the POWERHOUSE BBS (042) 616380 or 622170 GT NET 302/017. ❑

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Cel Aberration

by Graham Bowden

Adding a new twist to your art with the simplest of animbrushes.

Addictions you know, are a persistent pain in the posterior. Take my addiction for instance. Consumed and cursed am I with an unquenchable desire to experiment with art packages in general and *Deluxe Paint* in particular.

Readers of these pages may not see a problem in this, indeed these tutorials which have resulted from that very addiction may have proved a veritable godsend. But I, dear and gentle readers, find my addiction compounds with Workbench 2.x to place an almost insurmountable wall between me and thee. "How so" you say? Why, our only contact, though it be one way traffic, is via these *DPaint* discourses. If you cast your minds back several issues you may recall mention being made of problems which arose between Workbench 2.x and *Platinum Scribble*, my word processor of choice.

To refresh your memory, *Platinum Scribble* will not boot on the later Workbench releases unless *Deluxe Paint* is running in the background. But I'm addicted to *Deluxe Paint*. The moment it's running most thoughts of tutorials and divers scribblings are are output to the >Nil: device and I begin experimenting.

All in all it's just another brick in that wall. I kid you not when I say that it sometimes takes a month or more to begin a new series of articles because of this cursed addiction. It is perhaps fortunate that they are generally written in groups of three or more. If a month goes by though and one doesn't appear you'll know why. Hhmmm!

The Prefs Menu

Bog standard, as it comes packaged from Electronic Arts, the only items in the Prefs menu that are active at boot-up are the AutoGrid and FastAdjust preferences. AutoGrid's one function in life is to automatically size the PERSPECTIVE grid to the current brush dimensions whenever perspective is activated. It has nothing whatever to do with the grid tool in normal drawing modes.

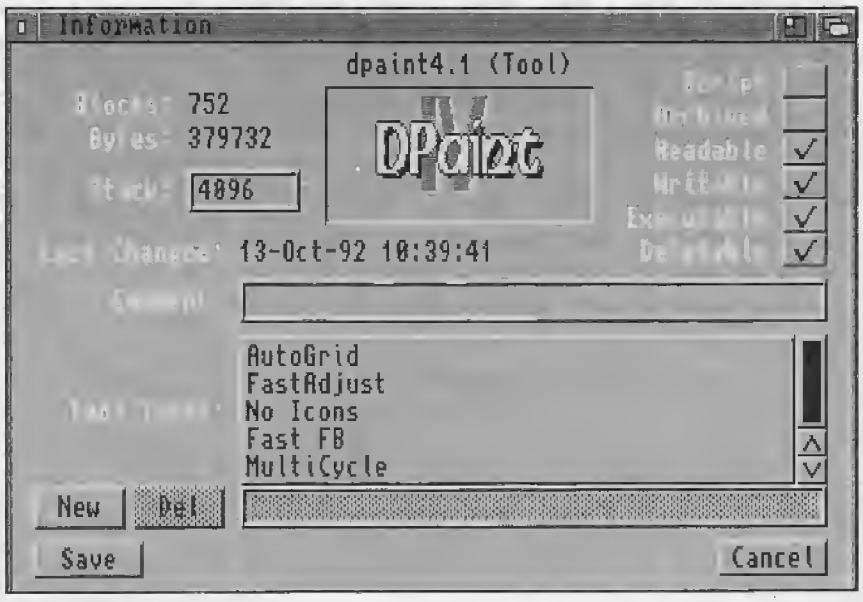
Fast

Adjust allows custom brushes to be drawn down at almost real time speeds when using HAM mode. Other Prefs menu items have to be manually selected at each boot up. If disk space is precious - and isn't it always - you may have made it a practice to select Prefs/NoIcons immediately after each boot. Other users, myself included, prefer to have Fast FB and MultiCycle active during all painting sessions. It's a chore though to have to hand select these items every time *Deluxe Paint* is started, is it not?

It doesn't have to be. Any item from the Prefs menu can be selected to be active by default every time *DPaint* is started. Simply click once on the *DPaint* icon on Workbench before selecting Info from either the Workbench menu in 1.x systems or by pressing <Right-Amiga>-i on 2.x or higher machines.

Remember, select Info while the *DPaint* icon itself is selected. Next simply add the required tool types to the Tool Types: list. Figure 1 shows how items from the Prefs menu have been added to the Tool Types: box exactly as they are written in the Prefs menu - case, spaces and all. For Amigabus Ignoramus (that's the scientific name for Amiga beginners, you know) simply click on the New button in the Info window and type the new tool name in the dialogue box then press return.

Figure 1



Do this for each tool required before exiting via the Save button. Next time *Deluxe Paint* is booted, all the tools added will be active by default. Users employing ToolManager or some other handy dandy file management utility will note that all these default tool types will also be active when the program is started via your hot key or menu item. Ripper!

Be Square

To my eye this tool seems a somewhat redundant feature, at least on the Amiga. Be Square tries to compensate for the fact that the screen pixels are not exactly square. In effect, if a filled circle is drawn with Be Square UNselected the resulting circle will not be perfectly round. By selecting Be Square *Deluxe Paint* will try to adjust the shape to compensate.

In Figure 2a two circles have been drawn with Be Square either on or off

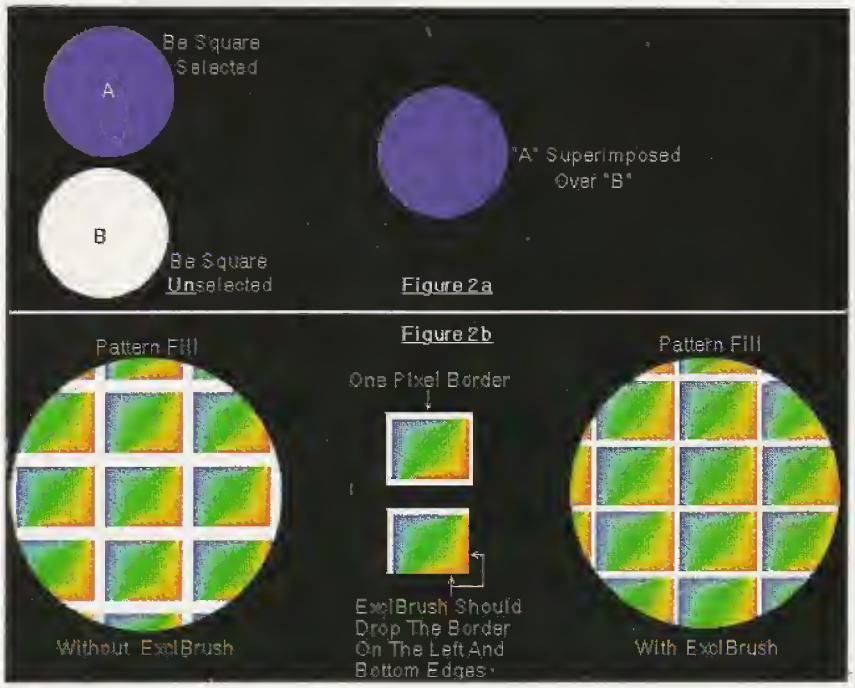


Figure 2

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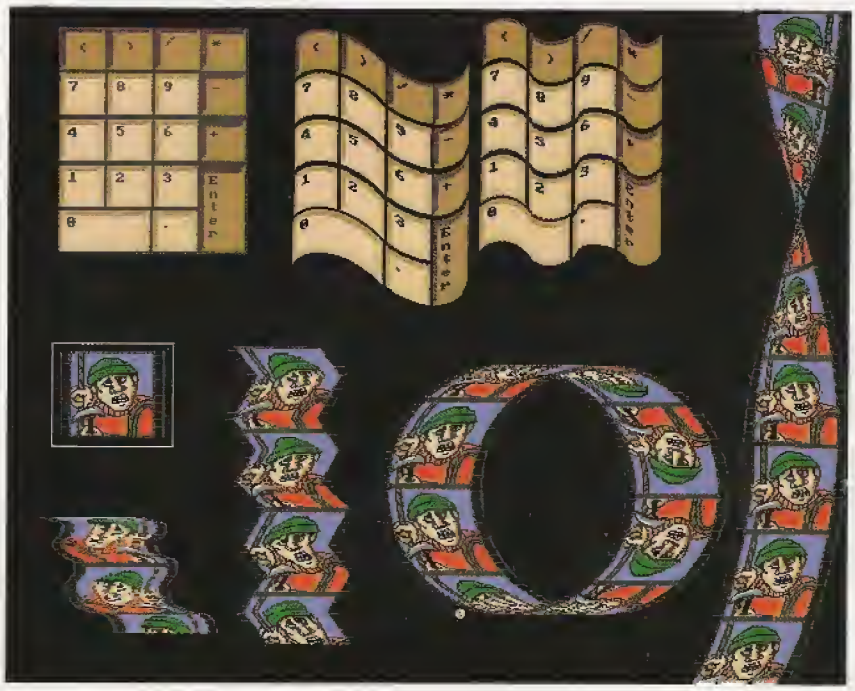

Figure 3

as noted. The third circle shows the blue (Be Squared) circle superimposed over the white (unBe Squared) circle. Several white pixels representing the distortion of the "unsquared" circle can be seen around the edges of the blue circle. Those white pixels are of course the "out of round" parts of the unadjusted white circle.

But hey, who cares! I can wear such a tiny amount of distortion any day. And just quietly between you and me - and everyone else who reads this - the adjustment when using Med-Res or Interlace, when the pixels really are something less than square, is totally unnoticeable.

But spare a thought for the IBMers - yes, *DPaint* is available in that alternate world. Whenever *Deluxe Paint* is used on one of those machines - in any screen format other than the IBM equivalent of Lo-Res - any attempt to draw a circle results in a football shaped ellipse with the effect looking

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rather sad if an attempt is made to animate said ellipse. This odd effect is compounded by the fact that Be Square in IBM does naught to fix the problem. Still, that's their worry, ours is the Prefs/ExclBrush tool type.

ExclBrush

When used in conjunction with the grid tool, ExclBrush is supposed to miss or exclude a one pixel margin along the left and bottom edge of a custom brush as it is grabbed. If a coloured rectangle with a one pixel border such as that shown in Figure 2b is picked up as a brush with "ExclBrush" selected AND the grid tool active, the resultant brush should appear as the one shown in Figure 2.

If a custom brush has a contrasting one pixel border entirely surrounding it, and that brush is used for a pattern fill in a filled shape, the single pixel border becomes a double pixel border as the brush edges abut, as shown in the pattern fill on the left of Figure 2b. If however, the border is only on two sides of the brush, the pattern will remain true to the desired one pixel outline as can be seen on the right of Figure 2b. This is what ExclBrush in conjunction with the grid tool is designed to do. Unfortunately something went awry between design and software. What does ExclBrush do? Nothing. Uh-huh, that's right, nothing, nil, nix, zilch. Well, except for occasioning much hardship when any attempt is made to grab a custom brush.

You see the mouse jumps about the screen like a demented cane toad as it settles on the points of the active grid. My advice then is to henceforth disregard this particular preference tool. Instead, why not amuse yourself playing with the following simple animbrush.

Simple Animbrush

How long do you think, would it take to draw the aberrant keyboard or the fancy filmstrip (courtesy Carmen Santiago out of Broderbund) in Figure 3? Several hours - or more - for

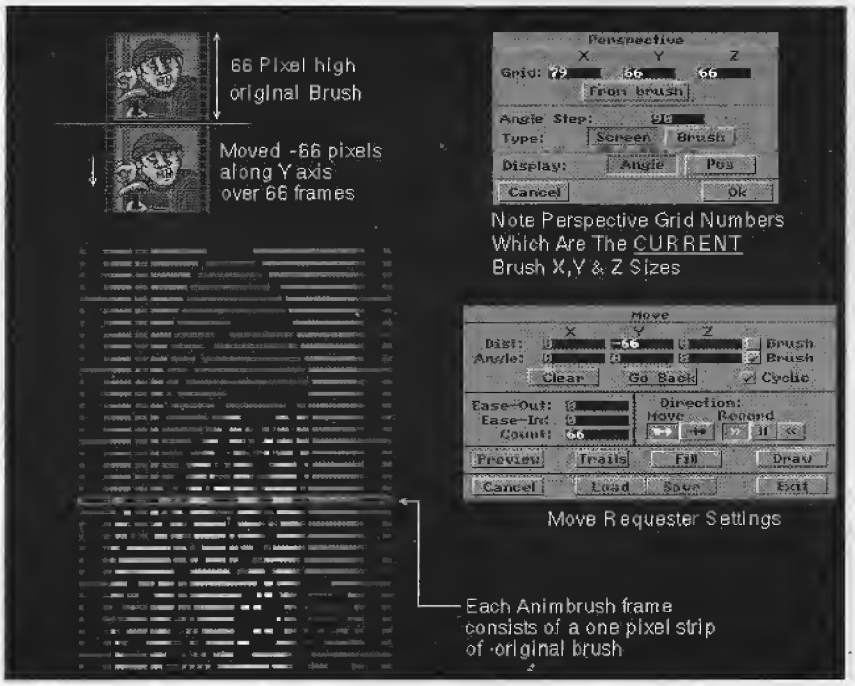

Figure 4

the average DPainter? Thirty to forty minutes for an ace artist perhaps? Actually, not more than five minutes for an electropainting artisan, I'd say. That's right, five minutes. Trust me, have I ever lied? As they say in the movies, "ve haf vays off makink tings curl". So fire up *Deluxe Paint* and follow on.

To begin, a suitable brush will be required and the size allowed for that brush will depend on your system memory. Multi-cel animbrushes require multi-frame animations from which to pick them up and multi-frame animations require multi-megs of memory especially when working in higher resolutions. The animbrush used for this particular genus of special effect requires as many cels as the original brush is wide (X dimension) or high (Y dimension).

The keypad brush at the top left of Figure 3 is 142 pixels wide (X pixels) so required a 142 frame animation from which the animbrush was grabbed. The mountaineer brush on the other hand is a mere 66 pixels high (Y pixels) so demanded only a 66 frame animation for the animbrush. Also the animbrush's major dimension - X or Y - determines the direction - horizontal or vertical - that the distortion follows. Confused? All will be revealed in the following paragraphs.

A glance at Figure 4 will go a long way toward lifting the fog in fact. Here the mountaineer brush is carefully picked up ensuring that no background border is grabbed with the brush. Next step is to call up the perspective settings requester to quickly and easily find the brush dimensions. Remember with "Prefs/AutoGrid" selected (as it usually is by default) the perspective requester grid numbers reflect the current brush's dimensions.

So provided the custom brush is currently attached to the mouse, the X or Y dimension can be noted for future reference. In this case the mountaineer brush has a Y dimension of 66 pixels so 66 animation frames are created from the "Anim/Frames/Set #.." menu item.

The brush will need to be stamped down before calling up the move requester and entering -66 in the Y Dist: box. With the Count: set to 66 draw

the animation. This means of course that the brush moves one pixel down the screen for each animation frame. With the animation completed it's time for the animbrush.

The secret here is to pick up only the single pixel thick bottom edge of the mountaineer picture in animation frame one. So with "Animbrush/Pick Up.." selected the cross hairs are used to highlight only that one row of pixels. As the animation steps through its 66 frames while the animbrush is being plucked from the screen each succeeding cel of the brush consists of consecutive one pixel strips of the picture.

Now with this simplest of animbrushes attached to the mouse draw a wriggly line down the screen. The result will look like the distorted film strip below the mountaineer's picture in Figure 3. The fan folded fellow can be created using the unfilled polygon tool.

Being a simple sort of fellow I generally refer to this tool as the "wonky" tool to remind my addled brain that w and W are the keyboard equivalents for an unfilled or filled polygon respectively. Normally the only way to release the wonky elastic band from the mouse once a wonk is begun is to return to the origin point of the polygon - the point from which the wonky was initiated - where a click of the mouse button will return things to normal. However in this case a complete polygon is not required so a tap of the shift bar can be employed to release the mouse once the fan film is completed.

The endless circle in Figure 3 is not really a circle, it's an ellipse. *Deluxe Paint* uses a different method of circle construction when a custom brush is the current brush. Rather than draw the circle in one sweep as it does with a built in brush, *DPaint* draws four connected quadrants and this method is unsuitable for the results required here. The ellipse tool on the other hand will draw a continuous circumference and so should be used in situations such as this unless some other special effect is required.

And what of that ribbon of colour stretching down the right of Figure 3? For this the Move requester is employed.

After stamping cel one of the animbrush down, the Move requester is summoned and the following settings entered. Set the Y distance to minus 330, the Y angle to 180 degrees, the Count: to 330 and select the middle Record button to ensure all the action appears on one frame. Clicking the "Draw" button results in an apparent strip of film twisting through 180 degrees as it moves 330 pixels down the screen.

A little touching up may be required to repair a few holes in the film. Then there's a tricky bit. To complete the illusion an extra curved piece of film is needed to span the gap between this short spiralled piece of film and the bottom of the screen. Simply selecting the curve tool and stretching an animbrushed curve across the gap may seem OK but all is not as it seems. You'll find the bottom of the spiral has the mountaineer reversed because of the twist in the film but the animbrush attached to the mouse is not reversed.

Sure it will be reversed if perspective mode is entered into, but the curve tool cannot be used while perspective is active. The answer is to flip the animbrush horizontally using keyboard "x" which is much faster than using the "Brush/Flip/Horiz" menu item, isn't it? With the brush flipped the curve tool can be employed to finally complete the filmstrip.

Oh and by the way, because the animbrush steps through its cels from one to 66 unless specifically told to do otherwise via the Animbrush Settings requester, any attempt to draw while moving upward on the screen will result in an inverted mountaineer. Try it with your own brush.

Having covered all that, the keypad animbrush should be easily understood. Of course it's created by animating the original brush along the horizontal X axis rather than the vertical Y axis with the animbrush being grabbed via a one pixel strip up one side of the picture. The wavy keyboard pennants can be created using the curve tool for successive bends.

It's a great effect and it's easily created with *Deluxe Paint* once the technique is grasped. So what's holding you back? Go grasp it while I go ciao ... *Graham.* ❑

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Hot PD

Daniel Rutter selects highlights from the latest 30 Fish Disks

Fred Fish's enormous Amiga software library continues to pump out 30 disks every two months, and so it's now reached 910 in total. This level should mark the start of Fred's CD distribution of his software, so new Fish will be coming out on CD-ROM, quickly becoming the most popular software distribution method in the world.

This doesn't mean you're going to be unable to use Fred's stuff if you don't have a CD-ROM drive, though - the floppy distribution will continue in parallel, but the CD will have stuff Fred's never put on the floppies before, because including all the big stuff like pictures and sounds filled the disks too quickly. The way, dare I say it, of the future!

Here are the highlights of the latest 30 Fish disks - and an eclectic mix it is too.

Fish 884

BackUP 3.88 (+++)

A shareware hard drive backup program which offers all the features of commercial packages, but needs at least a megabyte of RAM and Workbench 2 or higher. *BackUP* has high density drive support, incremental backups, compression, verify, safe backups and a restorable configuration. If you don't have a commercial backup package it could well be what you're looking for.

S-Anim5 and S-Pic (+++)

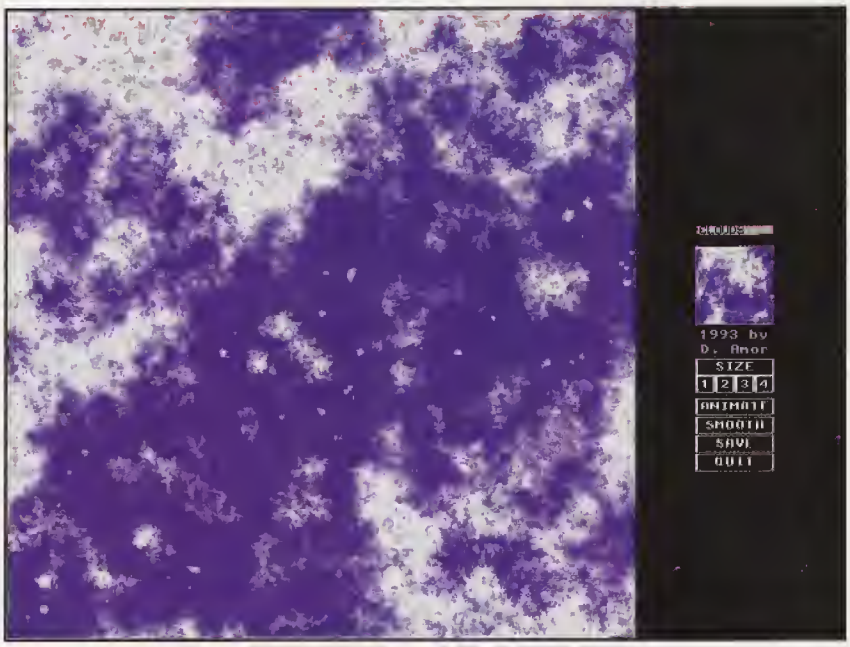
Complexity Guide:

+ If you can tie your shoes, you can use it

++ If you can tie them in the dark

+++ If you can tie them and edit your startup-sequence

++++ If you can debug the source for XShoe v3.4



Clouds creates random cloud scenery

Cash, MagicMenu and my own inimitably tasteful workbench

These neat little utilities turn Anim5 animations - the Amiga standard - and regular IFF pictures into self-contained self-displaying compressed files callable from the Workbench or CLI. This is really handy for making simple slideshows and demo disks. And they're not even shareware, so there's nothing more to pay!

Fish 817 contains *S-Text*, which does the same thing for text files.

Fish 885
FALSE (++++)

Here's a programming language whose compiler is a mere one kilobyte. For its size it's quite powerful, but of course it's just an oddity. Still, if you're a programmer with a sense of humour it's worth a look. FALSE is a Forth type language with lambda abstraction and lots of other goodies.

KCommodity (+++)

This is all you need if you just want to run the program. Fish 886 contains the source, only of interest to programmers. *KCommodity* is one of those Swiss Army Commodities - it contains a window-activator, time display with alarm, key clicker, window/screen cycler, mouse button swapper, phone bill calculator, screen and mouse blanker, pop up Shell, user definable HotKeys, exploding windows, screen dimmer, mouse accelerator and, predictably, more. This is quite a big update, and lets you get every pesky little commodity you care to name all together in one place. It requires WB2.

TextPort (+++)

Here's a suite of four public domain text porting utilities to convert text files between Amiga and MS-DOS format, remove hard carriage returns and reformat text to a new line length. Note that these utilities DON'T of themselves let you read MS-DOS disks, only convert files from IBM machines that are already on Amiga readable disks. Of course, if you're using *CrossDOS* or similar to make MS-DOS disks legible for the Amiga, you'll have no problems.

Fish 887
Amiga Real Time Monitor (+++)

This is a shareware program that displays and controls tasks, windows, libraries, devices, resources, ports, residents, interrupts, vectors, memory, mounts, assigns, locks, fonts, hardware and resident commands, and also contains a little system monitor and last-alert display. If you know what all of these things are, you'll see how useful this program is; if you don't you can get it anyway to peer at all the metaphorical cogs that keep your Amiga ticking.

MakeLink (+++)

A replacement for the CBM MakeLink program to create links to files in different places so you don't have to use eight versions of programs with the accompanying waste of disk space. *Makelink* handles soft and hard (inter-device) links, links to files and directories and link loop warnings -

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link loops are the Idiot Way To Crash Your Amiga #7.

Requires WB2.

Fish 888
CFN (+++)

On huge hairy UNIX machines, you can simplify the typing of filenames by hitting TAB, which hunts the current directory for files with the same first letters as you've just typed and fills in the blanks itself, asking for help if it finds more than one that could fit. You can do this on the Amiga with big shell programs like *Cshell* (see below), but if all you want is name completion without a billion other options then this is the program for you.

Fish 889
CShell (+++)

The latest version of *Cshell*, or Csh to its friends. I've been using Csh for some time though I won't pretend I use all the features, and this update polishes it up and adds some groovy new bits. Csh 5.31 features over 100 built in commands, 70 functions, new system variables, file name completion, programmable command line editing, file classes, auto cd, lazy cd, intuition menus for the shell window, automatic RX-ing, local variables, statement blocks and a whole heap of other stuff that gets worrying people like myself really excited. If you're serious about using your Amiga's command line, or just want to impress your geekier friends, get Csh.

Fish 892
Printer Drivers (+++)

There are a couple of useful printer drivers on Fish 892 - one lets you output DVI files, such as the ugly but powerful desktop publishing program *TeX* generates, into the language spoken by the HP LaserJet, and will deal with IFF pictures too. The other driver lets owners of Star Gemini-10X and 15X printers print graphics at twice the resolution attainable with the standard EpsonXOld driver.

Fish 893
AmigaWorld (+)

A database program with information about every country on Earth. *AmigaWorld* now features information on location, capital, area, population, languages, currency, flags, religion and international organisations. It's no atlas, but it gives fast basic information on every country and allows easy comparisons.

BadLinks (+++)

A utility which tests the links in newly written Amigaguide documents. Amigaguide is the Commodore standard for documentation, and it lets you easily navigate around large text files, with clickable keywords, simple tables of contents and so on. Rather than manually clicking on every button in your Amigaguide document to ensure each will link up with a valid node, just run *BadLinks*, which will work on documents which reference nodes in other Amigaguide documents too.

Clouds (+)

Creates random cloud scenery and will save them as IFF pictures so you can use them for anything you like. With palette modifications the clouds make perfectly good wood and stone textures too. The program seems to have some trouble figuring out if it's on an AGA machine or not, but overall works pretty well.

Fish 895
MuchMore (++)

The program Fred's used for ages to display his text files. *MuchMore* is a fairly small (22k uncompressed) program with smooth scrolling, built in help, searching and printing, and it supports 4 colour text in bold, italic, underlined, or inverse fonts. Bullet-proof and useful for anybody who wants to view text quickly and simply.

Fish 896
AnsiView (++)

A utility to view IBM ANSI pictures on the Amiga. ANSI is a format which these days is only used on bulletin boards, and uses IBM text and graphic characters in various colours to make blocky but very small pictures and animations. *AnsiView* supports the 16 colour IBM ANSI standard fully, and includes a few files to try it out with.

Fish 897
PrtSc (+++)

A weeny utility which makes the PrtSc key on your numeric keyboard actually do something! It won't work on programs that glom the whole system for themselves, but everywhere else you've got an easy way to dump your frontmost screen to the printer.

Fish 899
ARoach (+)

Creates a variable number of disgusting cockroaches on your screen, which scuttle around until they find a window to hide under. Move or close the window and the orthopterae are off again! Guaranteed to make the more squeamish of your workmates convinced that the universe bears them a grudge.

Fish 900
Popper(++)

A great little program that replaces Intuition menus with pop up menus which appear under the mouse pointer instead of in the top of the screen. This is nothing very exciting, but *Popper* also lets you tear off menus and keep them visible as separate windows, for quick and simple selection of repeated items. The first version was quite unstable, but v1.1 seems pretty good to me.

Robouldix (+)

Yet another *Boulderdash* clone and a darn good one too. *Robouldix* is shareware, uses 32 colour graphics and senses and adapts to PAL and NTSC. There are over 500 different objects in the registered version! You need a megabyte to play the game - and if you're a *Boulderdash* fan it'll hook you.

Fish 901
AmigaBase 1.31 (+++)

A hierarchical, programmable shareware database. *AmigaBase* has two display methods, filter datasets, search datasets, print datasets, and much more. Datatypes can be Integer, Real, Boolean, String, Memo (Text), Date and Time. Number of datasets is only limited by available memory. Also included in the package are some example projects. If you need a powerful database, *Amigabase* is worth a look.

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Fish 902
VirusZ (++)

The Amiga virus scene has slowed down lately, with only the irritating F*** virus to break the monotony, but it pays to stay up to date. *VirusZ* recognises over 220 boot viruses and over 115 file viruses - it tests itself for infection too. It can also decrunch files for testing. The memory checker removes all known viruses from memory without causing crashes and checks memory for viruses regularly. It'll run on any machine, and works well.

Fish 903
Viewtek (+++)

A feature packed picture and animation viewer which shows most Amiga pictures, including 24-bit ILBM's if you've got the hardware, most Compuserve GIF format images, most JFIF format JPEG images and most ANIM Op-5 format animations, with support for different palettes for each frame. *Viewtek* supports SHAM, CTBL, and PCHG images, ECS/AGA display modes and clipboard viewing. If you don't want to muck about with different viewers for everything and you need a program that'll handle unusual formats, this is the one for you.

Fish 904
Fill (+++)

A smart file copier which goes through a directory full of files and copies them elsewhere so as to fill the destinations as efficiently as possible. Just doing a bulk copy to floppies always wastes space; *Fill* does the maths for you and all you have to do is feed it the disks. If you need to put a load of pictures, sounds or music modules onto floppies and still want quick access - something you can't do with a traditional backup - *Fill* is the program to use.

Term 3.4 (+++)

The popular WB2 communications package. This is NOT the full program, just the new files, so you already need *Term 3.3*, which was on disks 831, 832 and 833. This update fixes more than a couple of bugs, so it's worth having.

Fish 905
DTree (+++)

Similar to *Tree* on IBM machines. *Tree* displays a device's directory hierarchy in the shell, and supports standard input/output, so you can hook it up to pipes, use redirection and do all those other cool things that make you think that perhaps staying home on a Saturday night is worth it.

NullModem (+++)

A software device that imitates two modems and a phone line, on one machine, so you can have two terminal programs talking to each other and thinking they're on different machines. This may seem pointless, but it lets you know EXACTLY what each side's saying to the other, so you can hunt down bugs easily.

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Fish 906
MagicMenu 1.27 (++)

A program which gives you nice pop up menus like *Popper* but includes more options and seems more stable - the first version of *MagicMenu* clashed with lots of things but this one behaves itself. There's funky 3D menu rendering, keyboard control, automatic time-outs and *MagicMenu* remembers the last selected item, and lines up pop up menus so it's handy to select again.

Move (+++)

A compact, fast CLI move command that allows the moving of files over multiple devices. It only does a complete copy-and-delete move when you tell it to move a file to a different device (it just renames for files on the same device) so it doesn't waste time. It works with links and requires WB2.

PowerData (+++)

A shareware program which patches AmigaDOS, enabling all programs to read and write files packed with *PowerPacker* in way that is completely transparent to themselves and the system. Programs will read powerpacked files directly, and will magically start compressing their own data files as they create or update them. Requires WB2.

Fish 907
CyberPager (++++)

Lets you send alpha-numeric pages from your Amiga. This is accomplished by dialing into an IXO protocol compliant pager central and uploading messages. *CyberPager* features alias files for commonly paged people to be referred to by name rather than PIN number, group files allowing messages to be sent to many people at once, message logging, and, you guessed it, more.

VideoTitler (++)

A shareware program which generates professional looking TV titles and credits for your own videos. *VideoTitler* has very smooth scrolling, and support for colour fonts and pictures with AGA support.

Fish 910
PowerCache (++)

A shareware WB2 and higher disk cache program to make your hard or floppy disk read and write operations faster by using RAM to make the disk devices work more efficiently. *PowerCache* works from a graphical interface and includes multiple unit caching, selectable read-only or read/write cache mode, cache in a file option, statistics graphs, a low memory handler, a full ARexx interface and more than 100k of AmigaGuide documentation. The evaluation version only works for 30 minutes at a time, but it doesn't blow up after that period so there's no danger.

Next month there'll be another pair of companion disks - I've got plenty of new stuff including another *Artillery* clone (groans from the gallery), the usual couple of Really Stupid Programs and, maybe, something useful too. 'Til then!

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CanDo Column

by Greg Abernethy

Designing an Animation Viewer

This month we will be designing an Animation Viewer, allowing you to load, play and step frame full-screen animations. As far as I am aware CanDo will only display *Deluxe Paint* (anim5) format animations. Experiment with different animations to see what actually works. The viewer consists of a Control Panel with VCR type controls for controlling the animation. It can be toggled from front to back while viewing the animation.

Creating the Animation Viewer

The specifications for the window are;

```
WINDOW NAME    "Anim Viewer..."
WINDOW SPECIFICATIONS
X POSITION = 0 : Y POSITION = 200
WIDTH = 640 : HEIGHT = 120
NUMBER OF COLOURS = 4
DRAG BAR GADGET
```

```
WINDOW OPTIONS
THE WINDOW HAS VISIBLE BORDERS ALWAYS
OPEN WINDOW ON OWN SCREEN

CARD SPECIFICATIONS
CARD NAME    "Control"
BEFOREATTACHMENT SCRIPT
ListenTo "AnimEvent"
SpeakTo "AnimRexxPort"
IfError
   Dos "run >NIL: <NIL: c:AnimManager
   -tAnimEvent"
   Let TimeOut = 50
   Loop
      Delay 0,0,10
      SpeakTo "AnimRexxPort"
      IfError
         Let FoundAnimPort = FALSE
      Else
         Let FoundAnimPort = TRUE
      EndIf
      Let TimeOut = TimeOut - 1
   Until FoundAnimPort OR (TimeOut = 0)
Else
   Let FoundAnimPort = TRUE
EndIf
If NOT FoundAnimPort
   Quit
EndIf
```

Regular readers of this column will be pleased to know Greg has combined and edited the columns along with lots of additional information into a complete book! Stay tuned for details next month.

Explanation:

The script tries to load the AnimManager from the c: directory. Ensure you have a copy of the AnimManager, from the CanDo:CLI Utilities drawer, in the c: directory before running this program. If it doesn't find the AnimManager it will quit.

```
AFTERATTACHMENT SCRIPT
SetPen 1
PrintText "<",40,16
PrintText "S/B",32,25
PrintText "I<<",112,16
PrintText "REW",112,25
PrintText ">",203,16
PrintText "PLAY",191,25
PrintText "STOP",270,25
PrintText ">>I",354,16
PrintText "FF",358,25
PrintText ">",445,16
PrintText "S/F",437,25
AreaRectangle 278,16,17,6
Let play = 0
```

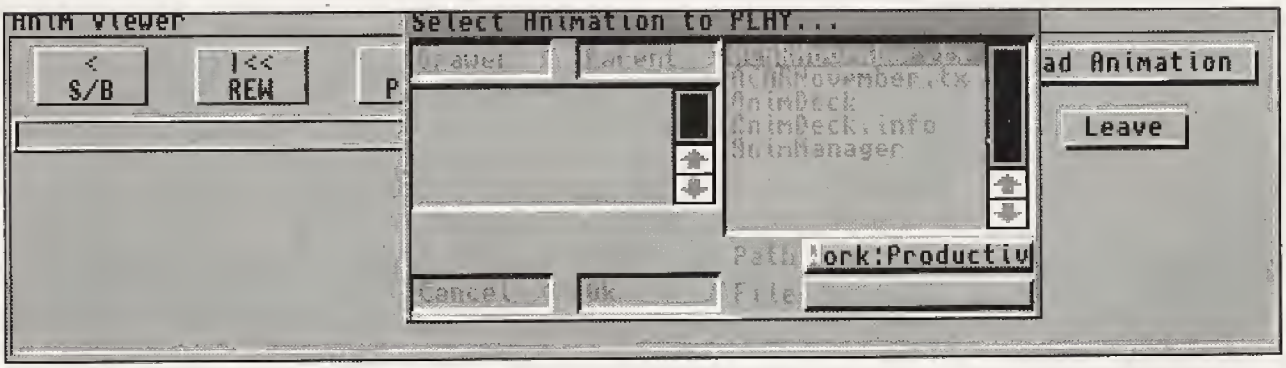
Explanation:

This script draws the VCR controls onto the blank buttons on the window. The variable "play" is set to 0 so that no messages are sent to the AnimManager when there is no animation currently loaded.

VCR Control Buttons

There are SIX control buttons. To

Figure 1 - Loading an ANIMATION using CanDo's File Requester



save space I will describe the set-up for one button and give you the names and offsets for the other buttons.

```
STEP REVERSE BUTTON
NAME   "StepBack"
ORIGIN  X = 16 : Y = 14
SIZE   X = 57 : Y = 20
BEVEL BORDER : OUTLINE
RELEASE SCRIPT
Do "Action","SB"
```

Explanation:

The current action is sent to the routine "Action" as ARGUMENT ONE.

The other Button Names, offsets and scripts are;

```
BUTTON 2: Name - "Rewind":X - 96:Y = 14
   Script - Do "Action","R"
BUTTON 3: Name - "Play":X - 177:Y = 14
   Script - Do "Action","P"
BUTTON 4: Name - "Stop":X - 258:Y = 14
   Script - Do "Action","S"
BUTTON 5: Name - "FastFwd":X - 339:Y = 14
   Script - Do "Action","F"
BUTTON 6: Name - "StepFwd":X - 421:Y = 14
   Script - Do "Action","SF"
```

```
LOAD BUTTON
NAME   "Load"
Text   " Load Animation "
ORIGIN  X = 494 : Y = 16
SHADOW BORDER : COMPLEMENT
RELEASE SCRIPT
If dir = ""
   Let dir = TheCurrentDirectory
EndIf
MoveScreen 0,136 - ScreenY
Let File = AskForFileName(dir,"Select Animation to
PLAY...",200,1)
If FileOf(File) <> ""
   Let play = 1
   MoveScreen 0,256 - ScreenY
   Do "Action","N"
   ScreenTo FRONT
   IfError
   EndIf
   SetText "Name",FileOf(File)
   Let dir = PathOf(File)
EndIf
MoveScreen 0,200 - ScreenY
```

Explanation:

If the user hasn't previously logged on to a directory location, I need to know where to begin. The Current Directory is a good place to start, because the user may have this program in the same location as the animations. If they change the directory location, this will allow me to continually update the directory location. I pop up a requester asking for the user to select the animation to load.

It is necessary to move the screen up to fit the requester in. I tried opening a requester without raising the screen and got a nasty "OUT OF MEMORY" error. If all is well the animation will load and be displayed. I have noticed that after the disk access of loading the animation, there is a reasonable pause before the animation is displayed. Perhaps a "Loading. Please Wait..." message could be added at this point. Finally the screen is moved back down.

```
LEAVE BUTTON
NAME   "Leave"
Text   " Leave "
ORIGIN  X = 531 : Y = 38
SHADOW BORDER : COMPLEMENT
```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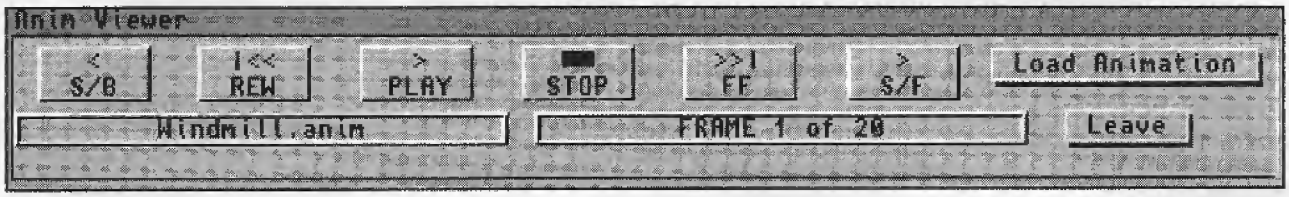

Figure 2 - The VCR Control Panel

```
RELEASE SCRIPT
Quit
```

There are two fields for displaying the name of the animation and the current frame/total frames numbers.

```
NAME FIELD
NAME    "Name"
ORIGIN  X = 8 : Y = 40 : WIDTH = 240
BORDER = DOUBLEBEVEL
TYPE = TEXT 32 Characters CENTRESTRING
No SCRIPT
FRAME FIELD
NAME    "Frame"
ORIGIN  X = 268 : Y = 40 : WIDTH = 240
BORDER = DOUBLEBEVEL
TYPE = TEXT 32 Characters CENTRESTRING
No SCRIPT
```

There is one KEY INPUT OBJECT for toggling the VCR Screen."

```
FrontToBack" KEY INPUT OBJECT
NAME        "FToB"
QUALIFIER   NONE
KEY CODE    F10
RELEASED SCRIPT
If sl = 0
   Let sl = 1
   ScreenTo BACK
Else
   Let sl = 0
   ScreenTo FRONT
EndIf
```

Explanation:

This script simply moves the screen from front to back depending on the current status of the variable "sl".

```
ROUTINE
"ACTION" Routine SCRIPT
If play = 0
   ExitScript
EndIf
If ARG1 = "N"
   Pointer OFF
   SendMessage "Flush"
   SpeakTo "AnimRexxPort"
   SendMessage "LoadAnim"|||File
   SendMessage "SetEndOfAnim Pause"
   SendMessage "Screen ToFront"
   SendMessage "Play Forward"
   Pointer ON
ElseIf ARG1 = "P"
   SendMessage "SetEndOfAnim Repeat"
```


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Figure 3 - AfterAttachment Script Editor

```
   SendMessage "Play Forward"
Elself ARG1 = "S"
   SendMessage "Pause"
Elself ARG1 = "R"
   SendMessage "SetEndOfAnim Pause"
   SendMessage "Play BackWard"
Elself ARG1 = "F"
   SendMessage "SetEndOfAnim Pause"
   SendMessage "Play ForWard"
Elself ARG1 = "SB"
   SendMessage "Play BackWard 1"
Elself ARG1 = "SF"
   SendMessage "Play ForWard 1"
EndIf
```

```
Do "SetFrame"
```

This Routine determines what action has been requested by the user and sends the appropriate message to the AnimManager. See the CanDo Manual for an in-depth discussion of these commands.

```
ROUTINE "SetFrame" SCRIPT
SpeakTo "AnimRexxPort"
SendMessage "GetStatus"
Let CF = GetWord(MessageReturned,2," ")
Let NF = GetWord(MessageReturned,4," ")
SetText "frame","FRAME"|||CF|||"of"|||NF
```

Explanation:

This Routine gets the current status of the animation and sets the "frame" field to the current frame and total frames numbers.

That's it. You can now load and display full screen animations. This project could be useful in conjunction with a multimedia application. ❑

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AMOS: Getting into Assembly

by Wayne Johnson

How often have you needed AMOS to get that little bit faster? The compiler is fine for most applications, but have you wanted to be able to program machine code routines for use within AMOS code? Most will say that Assembly language is too hard. Well, read on, I should have you writing you're own routines in about 30 minutes time.

Say for example, you had a puzzle game that was 20 squares by 20 squares. The object of the game is to click on the squares to change their colour to red, and in doing so, make a path of red from the top left hand corner to the bottom right hand corner. After each click, your program checks the grid to see if there is a possible path of red squares between the two corners. Take a look at Figure 1 to see what I mean.

For a program to check if a line of red squares connect from point a to point b, it would have search along the red squares in the grid, testing every possibility of adjacent reds.

This would happen every time you click on a square. Depending on your coding ability, it might either be a fast sort or you might notice a slight delay after each click. Not good if you are a fast player.

And what if the grid was 100 x 100? You're asking for trouble! What we need is a machine code routine to do it for us, and pass the result back to AMOS!

What do I need to do it?

That example is a fairly complex project to do, and so I'm going to teach you some quick and dirty machine code to do the following:

1) Take the number x, entered in an AMOS program.

2) Multiply x by 2, x amount of times.

3) Then send the result back to AMOS.

So what do you need to create your assembly programs? Either:

DEVPAC 2 or 3.

or

A text editor (such as ED or MEMACS), a PD assembler such as A68K, and a suitable PD linker.

The quick and dirty machine code tutorial

Ok, firstly I'll run through the Move.l command:

```
Move.l  #number,Register
```

Moves a number into a register (similar to AMAL variables like RA, RB, R2, etc).

```
Move.l  Register,Register
```

Obviously used for a number from one register to another.

```
Move.l  location,Register
Move.l  Register,location
```

Used for storing and retrieving values into memory locations like variables.

Numbers

Numbers can be moved into places (like d0) as a binary number like this:

```
Move.l  %1101,d0
```

as a decimal number like this:

```
Move.l  #13,d0
```

or as a hexadecimal number:

```
Move.l  $d,d0
```

Registers

There are 8 data registers you can use and these are:

```
d0 d1 d2 d3 d4 d5 d6 d7
```

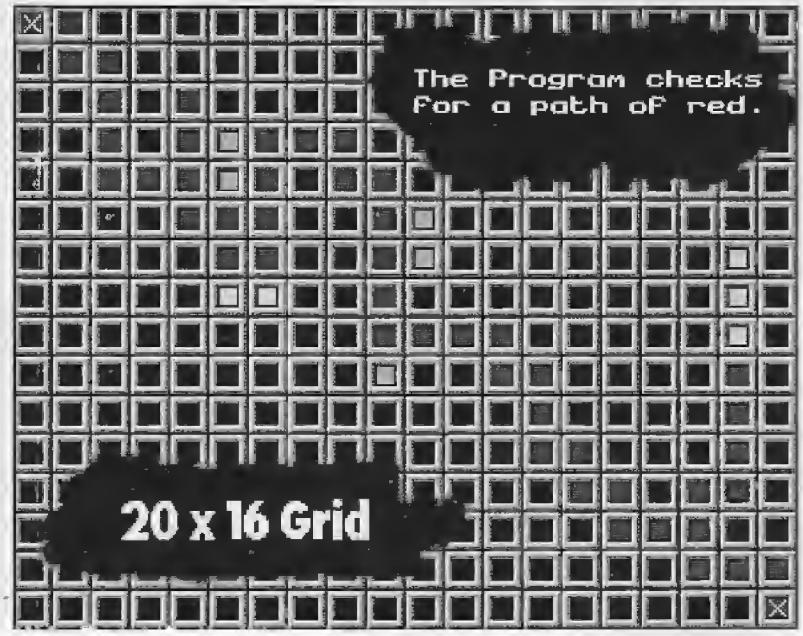
These hold numbers to allow you to add data registers together or perform other mathematical functions.

There are 8 address registers:

```
a0 a1 a2 a3 a4 a5 a6 a7
```

These are designed to hold memory locations or to find the address of numbers that have been stored in places that

Figure 1 - Examples of searching



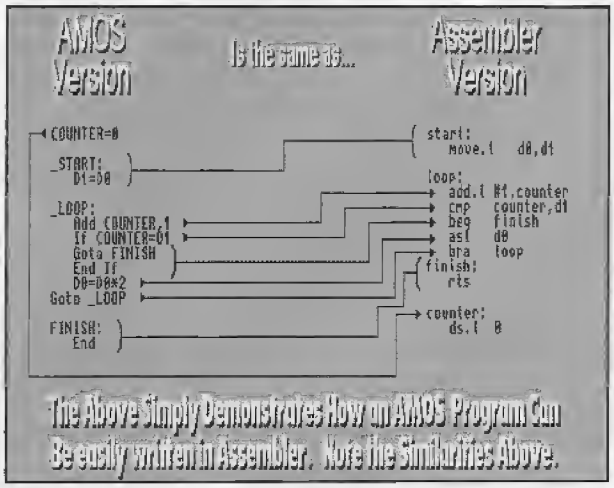


Figure 2 - Similarities between Assembler and AMOS

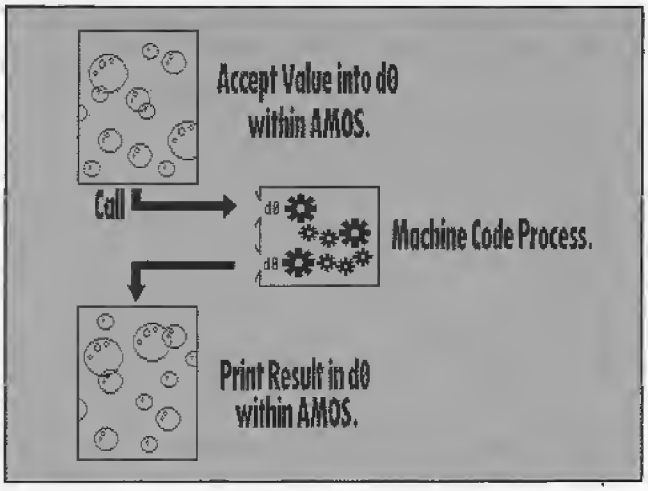


Figure 3 - Our program's process

have a label (see a bit below). NEVER USE LOCATION A7! This is called a stack pointer and should be used by the system only.

Registers are like variables in AMOS such as: A, B, _HELLO or variables in AMAL like: RA, RB, R0, R3.

Locations

Locations are numbers stored somewhere in memory only known where it is by the name that is above it. For example:

```
MARY:
  DS.l   5
```

In the above example, we have Declared Storage, stating that we want the number 5 to be at the location in memory called 'MARY'. So later on, when we use:

```
Move.l  MARY,d0
```

it will move the number 5 into the register d0. We have to do this with the Amiga because it is a multitasking machine. If we just copied numbers to any location in memory, what would happen if a program was already using that bit of memory? You could crash the machine. Therefore, when we use a label such as MARY and use the DS.l command to declare a number, the Amiga will find a spot inside itself somewhere and make a storage space for the number.

Next, the ADD.l command. Like the AMOS command, it simply adds one number to another. Say, for instance, that register d0 contains the value #8 (decimal 8). If we use the command:

```
ADD.l   #5,d0
```

the program will add 5 to 8 and the result (which is 13) will be left in d0.

We can also use locations, like this:

```
ADD.l   #5,MARY
```

If the location 'MARY' contains the value #10, adding five will make #15 and this will be left behind in MARY. In other words, after the addition, the location in memory marked by MARY now contains 15. The ADD command is the same as the one used in AMOS except that the AMOS version of ADD is swapped around, ie: ADD variable, number. Be careful not to mix them up.

It's not that hard, is it? Let's move on to the CMP command. CMP stands for compare. This simply compares two numbers together, like this:

```
CMP #20,MARY
   or
CMP #20,d3
   or
CMP d3,d5
```

The first example just sees if MARY contains the number 20. The second example sees if register d3 contains the value of d3. What the command is really doing here is subtracting the first number from the next. This means that there will be a result when two numbers are compared. Some of the following will happen:

1. The first number will be equal to the second.

2. The first number will not be equal to the second.

3. The first number will be greater than the second.

4. The first number will be less than the second.

The Amiga will remember what situation happened after you compare two numbers with CMP. If you want to 'gosub' another section of your program depending on one of the above 4 situations, you have to follow the CMP command with one of the four following commands:

1. BEQ (Branch or GOSUB if the numbers are equal)

2. BNE (Branch or GOSUB if the numbers are different)

3. BPL (Branch or GOSUB if the first number if larger than the second)

4. BMI (Branch or GOSUB if the first number is smaller than the second)

So to use a CMP and Bxx command together, you do it like this:

```
CMP #5,d3
BEQ SUBROUTINE
```

Catching on? The program compares d3 with the number 5. If d3 already has the number 5 inside it, the program will GOSUB to SUBROUTINE. If not, then the program will ignore the BEQ SUBROUTINE line and continue to the next.

By the way, we have to have a subroutine with the label SUBROUTINE (or any word) above it, just like in normal AMOS programs.

Next command to learn is ASL:

```
ASL  d3
```

Doubles the contents of d3 or multiplies it by 2.

ASR d3

Halves the contents of d3 or divides by 2. MAKE SURE d3 DOES NOT CONTAIN 0 when using ASR! You'll get a division by 0 and may crash the machine.

Just about done for the moment:

JMP SOMEWHERE
BRA SOMEWHERE

They do the same thing. Basically they are a GOTO to SOMEWHERE (a label like in AMOS Basic). These two can just be issued anywhere. You don't need to Compare (CMP) or anything first.

Finally, the RTS command. This is the same as the RETURN command in AMOS Basic. If you use one of the Bxx commands, BEQ, BNE, BPL, BMI, your program will jump to another part of the program (a subroutine). This is like the GOSUB like in AMOS Basic as I mentioned before. Use an RTS command to return to the line after the Bxx command.

Putting it all into Practice

Now that we know a few necessary commands to write simple sorting programs in assembler, how do we start writing it all?

Get out your assembly package or text editor and enter the following program:

```
start:
    move.l    d0,d1
loop:
    add.l     #1,counter
    cmp       counter,d1
    beq       finish
    asl       d0
    bra       loop
finish:
    rts
counter:
    ds.l      0
    end
```

First, I'd better make a point of how to indent programs when you write them with a text editor or assembly package. For labels, like in AMOS, such as finish: above, they should start at the beginning of a line and have a colon (:) at the end of them. Just like in AMOS Basic.

The commands should be indented and the following registers or locations should be indented a second time. So what's the program doing?

We take a look at the bottom of the program and see that COUNTER has been set up as a memory location containing a variable. This is also set to 0.

At the beginning of the program, I copy the contents from d0 into d1. This is because shorty we will set up a program in AMOS that places our start value into d0. We want to work with a copy of d0 by copying it into d1 and placing our final result into d0 again for AMOS to retrieve. But to continue.

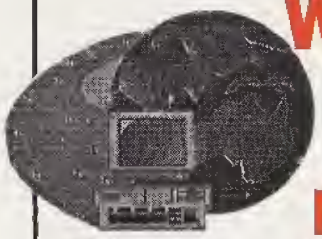
We start a loop defined by LOOP: and immediately increment COUNTER by 1. We then compare the current number held in COUNTER with the value that has been taken from the AMOS program (which will follow shortly). If the values COUNTER and d1 are the same, then the program is finished and we jump out to the RTS function. If an RTS is issued while we are not in a subroutine, this tells the Amiga to quit the current program.

If the values are not the same then the program gets to double the number held in d0 again. It does this operation a total of d1 times specified in the following AMOS program which will place the original value in d0.

Finally, it jumps back to LOOP to go again. Some assemblers may even require the command END to be placed at the bottom of the program so it knows where to stop assembling. Assempro requires this, Devpac 3 does not.

So all in all, the program takes a value that is stored in d0, places it into d1 and them doubles the number stored in d0 a total of d1 times. So if the value stored in d0 was 11, the program would loop 11 and times the result in d0 would be 22528.

What do we do with it now? If you're using Devpac or similar, assemble the program to disk as an executable file. Other assemblers may need to turned into an object and linked. Best to read



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up on your documentation on your particular passage. Nevertheless, at the end of the day, we want a program that is able to be executed from the CLI.

The AMOS Side

Now, we have to program the part in AMOS that sends out the value into d0 for our machine code routine, calls the machine code program, and finally, retrieves our result in d0 again.

Here's the program:

```
Screen Open 0,640,50,4,Hires
Flash Off : Cls 0
Colour 0,$555
Do
   Locate 0,0
Input "Enter a value. Best between 1 and 12: ";N
   Dreg(0)=N
   Call 10
   N=Dreg(0)
Print "The routine returned the result as: ";N
   Wait Key
   Cls 0
Loop
```

The program opens a screen and asks for a number. Use a small value. Notice the use of Dreg()? It stands for Data Register like d0 or d5 in machine code. So whenever we place a value into Dreg(0), we are actually placing the value into the Amiga's d0 register. This is how we can pass values and data back and forth between AMOS and a piece of machine code. Using the call command, we call the machine code routine stored in Bank 10 (we haven't put it there yet!). After the Call command, the machine code routine has finished and we can then retrieve our routine from d0.

Putting the Machine Code into AMOS

Now the important bit. After writing both programs, how do we get them together? Simply make sure that the Executable piece of machine code is stored in a convenient place somewhere and type in the AMOS listing. Once you've type it in, go to DIRECT MODE by pressing ESC and type:

```
PLOAD "PATH:Filename",10
```

or

```
PLOAD Fsel$(""),10
```

if you want to use a file requester to locate the executable routine. These will load our machine code routine into bank 10.

That, my dear readers, is how it's all done. Take a look at the program comparison illustration and take note of how similar it can be to program in both languages. The next chart shows exactly how it all works.

Run it and see how you go. Remember, when you save the AMOS program, the AMOS code and the Machine code Program stored in bank 10 are all saved out together. You never need to merge them again.

Next month

Want more on machine code? Let me know. Thanks yet again for the calls. It's good to know that a lot of people do read this section rather than clean windows with it. Is there anything in particular you want to read about? Give me a call at the club. ❑

What is QuickNet™?

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The hardware is an industry standard EtherNet network board. The EtherNet component conforms to the IEEE 802.3 Standard & is built around the Fujitsu EtherNet chip set.

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Since QuickNet is based on the EtherNet standard any network installer can install the wiring & advise on correct cabling for any installation. A registered QuickNet dealer will be able to advise you (see advert in this magazine).

QuickNet Firmware/Software
The main part of the software is on a ROM on the network card. This allows QuickNet to auto-boot from a designated partition anywhere on the network. QuickNet allows for COMPLETELY TRANSPARENT operation as if the remote peripherals (hard disk drives, modems, printers etc) were actually connected to the terminal. QuickNet is a peer to peer network which allows a flexible network configuration. There is no need to have one "file server" that serves all the machines. The load of servicing hard drive accesses can be distributed among a number of computers. Any hard drive on any computer may be accessed (if authorised) by any other terminal.

QuickNet comes with a number of utility programs to aid in the management of the network. All of these use the Amiga's graphical interface to make configuring the system easy. Logon user names & passwords can be added & changed with the QuickLog utility. Access to some partitions may also be limited to authorised users only. A utility for configuring print servers is also included. This allows easy selection of spooling media & buffer size. An AREXX port is included to allow programs running on different computers to communicate. This allows one computer to control an application on another!

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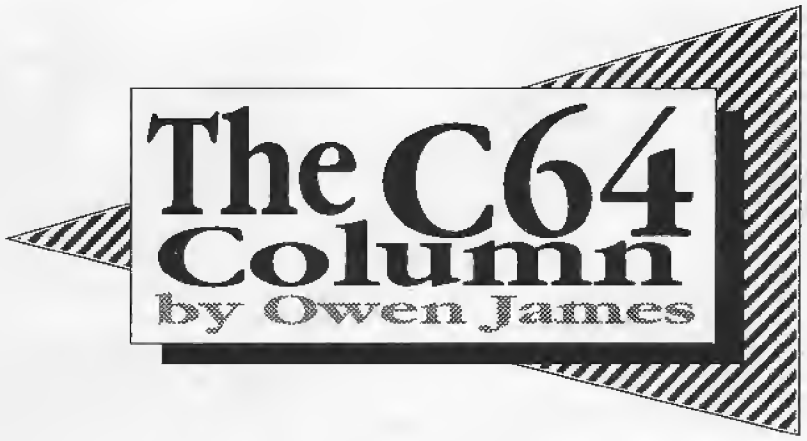

Seeking software

If you've tried looking for new software for your C64 recently then you've probably discovered how very little is still available. Most of the larger retailers have stopped supporting the C64, and in turn Australian distributors such as Computermate and Pactronics, who were once big supporters of the C64, are now distributing fewer and fewer C64 products.

We could blame pirates, software developers, retailers, or even Commodore for contributing to the gradual but steady slide, but although these factors may well have had something to do with it, the reality is that the C64 is starting to lose appeal. After ten years, that's hardly surprising.

Amigas are representing better value for money every day. Compare the cost of a complete C64 setup, even second-hand, to an A600 and you'll see what I mean. How could a C64, with its ten year old technology, compete with a loud, bright and colourful whizz-bang Amiga, now that their entry-level pricing is so similar?

The C64 will live for a very long time. In fact, I'm almost convinced it will never completely die. Not while there are still so many 'fanatical' users out there. These are the users that will spend six or seven hundred dollars, enough for a basic Amiga, on just a C64 drive from CMD.

And in the second-hand market, the C64 is a favourite. Scan down your local classifieds and you'll probably see close to half a dozen for sale on any one day. In my own business, one of the most common calls we receive is "I'm not computer literate, but I've just bought a second-hand C64. HELP???". And so begins another generation of C64 users.

For those of you happy to stick with the C64, there is still a surprising amount of software retailers willing to support you. Below is a list of businesses with C64 products or services.

Brunswick Publications - Offers a large selection of public domain software for the C64 at $5.00 per disk. Their latest software is often reviewed on these pages. Also produces a semi-regular disk magazine. Catalogue available for $5.00 by writing to Brunswick Publications, PO Box 458, Bondi Junction NSW 2022.

C64/128 Friendz & Contax - A mail-based user group for the C64/128, with access to other groups worldwide. Also offers a range of public domain software, and a regular magazine for members. Write to 11 Dunsford St, Whyalla Stuart SA 5608.

Code One Computer Services - Carries most available C64 commercial software, including the GEOS range. Can also transfer word processing, graphics and other data files into disk and data formats suitable for Amiga, Atari and IBM compatibles. For users thinking of upgrading to the Amiga, they also have a C64 emulation package available. Laser printing from C64 disks is also offered. For a free catalogue or other information call or fax (047) 57 3982, or write to PO Box 192, Katoomba NSW 2780.

Entertainment Software - Exclusive range of games, adventures and compilation packs for the C64. Also produce their own newsletter. For a catalogue, write to Entertainment Software, 21 Lawson Crescent, Taree NSW 2430, or telephone (065) 52 6991.

Logico - Offers a good selection of commercial software, including GEOS and entertainment titles. Also carries most CMD products. Call (02) 558 1884.

Maxwells - Still offer some commercial C64 software. For a catalogue, write to 162-164 Nicholson St, Abbotsford, Melbourne 3067, or telephone (03) 419 6811.

Novo Computer Hardware - Specialise in CMD hardware and software. For further information, contact Novo by writing to PO Box 237, Mayfield NSW 2304, or telephone (049) 201 102.

Southern PD - Offers a large range of public domain software for the C64. They have approximately 200 disks for $2.00 each and a free catalogue. Write to Southern PD, PO Box 329, Plympton SA 5038.

The Gamesmen - Provide mainly entertainment and some educational software for the C64. Often have excellent value for money game packs. 491 Forest Rd, Penshurst NSW 2222 Telephone (02) 580 9888.

If you're a modem user, bulletin board systems (BBS) provide excellent means of obtaining public domain software, meeting new people, and sharing ideas.

If you're in or around the Sydney area, one board I can certainly recommend is Way Out West on (02) 628 8888. Way Out West, or just WOW for short, has an excellent range of C64 public domain games and utilities, and more interesting for some, a huge range of both national and international messaging areas (echos). Way Out West is run by the ever-friendly and helpful Darren Gibbs.

Other systems you may like to check out are The Space Station (047) 742 252, Talisman BBS (059) 444 061 and (059) 444 062, Pilbara BBS (09) 419 2727 and Club-64 (07) 341 9560. Most of

these are connected to the worldwide Fido system, and offer several C64 related messaging areas.

MAIL

128 Software Hard To Get

Dean McKimmie of Victoria writes: "Dear Owen, I am a disabled reader of your C64 Column and I have been reading about the number of 64/128 owners that have written in concerning the lack of 64/128 software.

"I really do feel sorry for these users as I too once owned a 128 setup. I now own an Amiga 500. I would have stayed with the 128, but I could not find hardly any 128 software. They are a really great machine and should not be left out in the cold."

OJ: Thankfully, the C64's situation regarding software is not quite as bad as the 128. The only 128 software presently available is in the public domain, and even these titles are few and far between. Even GEOS software for the 128 is no longer available.

Muppet Kit works on Super Graphics

Mrs P Thiessen of Salisbury North SA writes: "Dear Owen, I purchased a copy of *Jim Hensons Muppet Print Kit* for the C64, but was at first a little disappointed to read that the program was not compatible with the Super Graphics Jnr interface, which is the one I use.

"After having a 'fiddle' with it, I found that by setting the interface to 1525 emulation and selecting the MPS801 printer from the printer set up menu, the program printed quite nicely.

"I hope this information may be of assistance to you and anyone else who may consider buying the program."

OJ: Thanks for the information. I'm sure that will be helpful to a lot of users that may have thought it couldn't be done. The Xetec Super Graphic Jnr interface is an excellent option for anyone wishing to use standard parallel (Centronics) printers with their C64, and there's very little that it isn't compatible with. For more information, call Code One on (047) 57 3982.

Awardsware

Mrs Daffney Turner of Beaconsfield Qld would like to hear from anyone with a copy of the 'Awardsware' Print Power data disk that they no longer need. If you have one, write to Mrs Turner direct at 8 Colby Court, Beaconsfield Qld 4740 with details.

For Sale

Travis Howell has the following C64 items for sale: 2 working C64s, 1 working 1541 disk drive, 1 1526 printer, 1 working datasette, 1 non-working disk drive, 1 non-working C64, 2 non-working datasettes, GEOS V2.0, games, books, magazines, all for $400.00. Any interested users should call Travis Howell on (03) 587 2459.

That just about concludes this edition of The C64 Column. As always, I'd love to hear from you. Drop me a line with your questions, comments, and suggestions care of The C64 Column, PO Box 288, Gladesville NSW 2111.

See you all again next month. ❑

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Phil Campbell's MEGA Entertainment

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One of the most popular IBM compatible action RPGs has just been released for the Amiga by Electronic Arts. Featuring all the exciting action of the PC original, *Space Hulk* puts you in charge of a team exploring a long deserted space freighter ... trouble is, it's not so deserted! Quick - grab a copy from your local software store now.

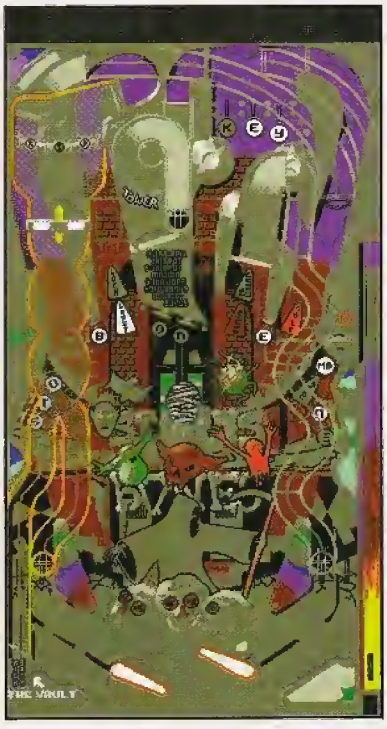
A fun way to help the disabled

Technical Aid for the Disabled (ACT) is a group of volunteers in Canberra who make technical aids to assist disabled people to live an easier and more productive life. It's a great charity, and well worth supporting.

And now you can help them out by ordering a disk from their new "CharityWare" collection. There's a Home Brewer Disk, with over 100 unusual recipes for home brewing enthusiasts; Kids Disk, which includes fun programs like KeyBang, Cartoon pictures, Crayon Paint and Animal Noises; and Jigsaw Disk, which includes the ever popular IFF2PCS program and a selection of 21 terrific pictures for ripping apart and putting back together on screen. Each disk costs only $6. To order, send a cheque or postal order to Margaret Enfield, Technical Aid to Disabled, 67 Launceston St, Lyons ACT 2606, or phone her on (06) 286 3675. (Why not send an extra donation as well?)

HotPoint signs another major label

Gremlin Software, the UK based computer game company, has signed Australian distributor HotPoint to exclusively market its range of software throughout Australia and New Zealand. Managing Director of HotPoint, Kevin Davies, said that his company's aggressive marketing and outstanding range of products has been responsible for HotPoint's instant success. Gremlin joins a growing stable of software houses on the HotPoint list, including Millenium, Team 17, Digital Integration, Supervision, Krisalis, and 21st Century.



Games and Hints - we've got it all

We're still pumping out plenty of ACAR Hints Disks (1 & 2) and ACAR PD Games Collection Disks too! If you're stuck in a game, order our Hint Disks - or if you'd like some cheap and cheerful fun, order our PD Game Disk. How? Just send a blank disk, a cheque or money order for $5 per disk, and a stamped, self addressed envelope to Phil Campbell, PO Box 23 Maclean NSW 2463. Make sure you specify which disk you want!

First CD-32 Game arrives

Yes folks, as I write I'm holding the CD-32 version of *Pinball Fantasies* in my hot little hand. Well, actually, I put it down so I could type better. The fact is, it's real, it's here, and it looks ... well, it looks like a round, silver compact disk. Boasting all the playability of the Amiga version, together with four times more colours and studio recorded CD quality music, the game should really rip! When we finally get hold of a CD-32 machine, we'll let you know more.

CD-32 reviewers wanted

Hey, if you've already got a CD-32 and you can write good - without no grammatic and speling bludners - why not drop me a line at PO Box 23 Maclean NSW 2463. Include a sample 300 word game review as an ASCII file on a standard Amiga floppy and if you make the grade, we'll be in touch! Don't forget to include your address and phone number!

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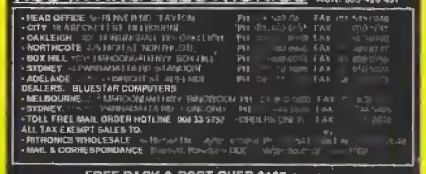

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Commodore 64 Hints

Earlier this month I received something extraordinary in the mail - it was a letter from the Iceman, who actually sent in some very cool C64 hints and tips. Here they are:

Rick Dangerous

Enter your name as FLUFOMATIC on the high score table to start the game on the level you died on.

Rick Dangerous 2

Type JE VEUX VIVRE (with spaces) for infinite lives.

Thanks Iceman. And now from the same cool guy, come some more hints and tips but for the Amiga.

Amiga Hints

Midnight Resistance

Type:
ITSEASYWHENYOUKNOWHOW
for infinite lives and credits.
Also use keys:
F1 to get a normal rifle
F2 to get a full auto
F3 to get a 3-Way gun
F4 to get a shotgun

Mercenary III Solution - Part 2

Last month we walked through The Man in the Hat's playguide to *Mercenary III*. This month, as promised, we bring you a guide to the locations of all the objects you'll need to win. Thanks again to the mysterious hat-man!

Object name/Location/Planet, Island, City/Floor

PLANET: ERIS
Powerglove / 3-04 / Snow Isle / -
Prizm / 6-05 / Bare Isle / 1
Timed Detonator / 14-05 / Capital / -
Newsland / 5-01 / KeyWest / -
Wig / 1-01 / Velos City / -
A-Z Computer / 8-03 / Capital / 9
Sights / 9-02 / Capital / B
Shield / 9-02 / Capital / B
Red Beacon Locator / 9-02 / B
Broomstick / 6-08 / Capital / -
Latter Rack / 6-08 / Capital / -
Craft Model / 14-11 / Capital / 1
Instant Prism / 14-11 / Capital / 9
Crossbow / 7-07 / KeyWest / B
Dust Bin / 6-02 / Key West / -
Armchair / 4-01 / Velos City / 9
Disguise / 4-06 / Velos City / -
Magician's Kit / 5-04 / Velos City / -
Sideboard / 6-04 / Velos City / -
Clipboard / 7-04 / Bare Isle / 9
Flight Schedule / 7-08 / Capital / -
Tragety Mask / 3-02 / Velos / -
Comedy Mask / 3-02 / Velos / -
Book / 3-02 / Velos / 4
Hintbook / 15-03 / Capital / -

PLANET: VESTRA
Rosette / 3-07 / Politburo City / -
Bil's Bill / 4-06 / Politburo City / 3
Candidates Log / 5-04 / Politburo City / 1
Noticeboard / 5-04 / Politburo City / 1
Paper Dart / 6-04 or 5-04 / Politburo City / -
Tissues / 3-01 / Politburo City / -

PLANET: METIS
Cobweb / 2-06 / Moonbase / -
Mailbox / 2-06 / Moonbase / -
Magerets Letter / 2-06 / Moonbase / -

PLANET: CYCLOPES
Karacke Machine / 2-02 / Idi Centre / -

PLANET: CLOTHO
Wall Phone / 2-01 / Clotho New Town?????? / -

PLANET: LOGOS
Bench / 2-05 / Logos City / 2
Ansaphone / 4-03 / Logos City / -
Land Dead / 8-03 / Logos City / -

PLANET: GAEA
Document In-Tray / 8-06 / Chaldea Met / 9
Land Prospectus / 6-08 / Chaldea Met / 9
Opinion Poll / 8-08 / Chaldea Met / 1

PLANET: BACCHUS
Space Invader / 2-08 / Bacchus W / -

PLANET: DION
Captains Log / 0-04 / Birmingham / -
Novagen Safe / 2-11 / Birmingham / -
Superperson Suit / 9-00 /Birmingham / 1
Photocopier / 15-14 / Birmingham / 9
Briefcase / 3-14 / Birmingham / 8
Screen / 5-09 / Birmingham / -
School Desk / 5-09 / Birmingham / -
Pot Plant / 5-02 / Birmingham / -
Bed / 5-05 / Birmingham / -
Wardrobe / 5-05 / Birmingham / -
Jules Trophy / 2-05 / Dion North / -
Zimmer Walker / 5-01 / Dion North / -
Table Lamp / 5-01 / Dion North / -
Walsh Dresser / 5-01 / Dion North / -
Lucky Charm / 5-01 / Dion North / -
PC Bil Report / 5-01 / Dion East / -

ALL THE KEYS
Key A / 3-00 / Dion/ Birmingham / 4
Key B / 1-00 / Clotho / Clotho New Term / -
Key C / 4-04 / Dion / Dion East / -
Key D / 1-03 / Gaea / UR City / -
Key E / 6-03 / Eris / Eris Capital / -
Key F / 1-03 / Gaea / UR City / 1
Key G / 1-03 / Gaea / UR City / 1
Key H / 14-11 / Eris / Eris Capital / 8
Key I / 1-03 / Gaea / UR City / -
Key J / ?-?? / ?????????????? / ?

ALL THE VEHICLES
Eagle 9SE / 2-06 / Metis / Metis Moonbase / -
Dart III / 9-03 / Gaea / UR City / -
Dodge / 0-01 / Gaea / UR City / -
Twin Turbo / Eris / Eris Capital / -
Concord III / 7-04 / Dion / Birmingham / -

ALL THE VEHICLES KEYS
Key - Eagle 9SE / 2-06 / Metis / Metis Moon / -
Key - Dart III / 9-03 / Gaea / UR City / -
Key - Dodge / 0-01 / Gaes / UR City / -
Key - Twin Turbo / 12-03 / Eris / Eris Capital
Key - Concord III / 5-05 / Dion / Birmingham / -

TRANSPORTERS
Transporter 0 / ??-?? / Tolosa / Enterprize / B
Transporter 1 / 1-08 / Bacchus / Bacchus Way / -
Transporter 2 / 8-03 / Eris / Capital / 1
Transporter 3 / 0-06 / Metis / Metis Moonbase / 9
Transporter 4 / 4-06 / Vesta / Politburo City / B
Transporter 5 / 4-02 / Logos / Logos City / 4
Transporter 6 / 8-08 / Gaea / Chaldea Met / 1
Transporter 7 / 1-00 / Clotho / Clotho New Term / 1
Transporter 8 / 3-14 / Dion / Birmingham / 2
Transporter 9 / 3-02 / Eris / Velos City / -

EXPLOSIVES
Timed Detonator / 14-05 / Eris / Capital / -
Explosive 1 / 9-14 / Dion / Birmingham / -
Explosive 2 / 5-02 / Dion / Dion North / -
Explosive 3 / 15-15 / Eris / Capital / -
Explosive 4 / 1-01 / Clotho / New Town / -
Explosive 5 / 3-11 / Gaea / Chaldea Met / -
Explosive 6 / 11-03 / Gaea / Chaldea Met / -

Thus ends this solution of *Mercenary III*, courtesy of "The Man In The Hat" of Nerang, Qld. But The Man has a problem. He doesn't know where to find the Blue Beacon Locator. Can anyone help?

Entertainment Letters

Send your entertainment questions, tips, suggestions and other stuff to the Entertainment Mailbox, PO Box 23, Maclean NSW 2463. Why? Cause thousands of other gamers will read what you've got to say, and that means you'll be famous. What are you waiting for? Get on with it!

Good one Amadeus and DirectSoft

Dear Phil, I would like to congratulate both Amadeus Computers and Directsoft Australia (the distributors of *Solitaire's Journey*) for their sterling service. Recently, in a fit of stupidity whilst backing up this game I copied the Empty disk onto the game disk. Luckily, Mark King of Amadeus organised the repair of the disk by Directsoft and I think that both firms deserve a bit of publicity in ACAR for their customer service and for their support for the Amiga.

Dr N.A. McAskill
Revesby, NSW

Ed: We're always happy to print good news stories like this one. I wonder why more people don't send them in? If you've found a dealer or distributor particularly helpful, let us know. As for Mark at Amadaeus and Bruce Wilson at Directsoft, I can certainly vouch for the fact that they're both particularly helpful guys who deserve the support of Amiga users.

Clever Contacts Wanted

Dear Phil, How would I get an up date list of the Realm's clever contacts (if it still exists) and - I was wandering about in the local newsagents looking for the latest ACAR when I saw this whopping 'AMIGA ONLY' something or other mag, which after several minutes of deciphering figured out that it was the same as ACAR. I didn't even have the cash to buy it! Am I out of touch a little?

And do you know anyone who would like to swap games with me through the mail? I have *Dune* and many other games. Do you have a list of the Realm's clever contacts or could you steer me in the right direction.

One last thing, you wouldn't happen to have *Battletech, EOTB I/II* or any other games? By the way, did they ever release *Wolfenstein 3D* on the Amiga?

Andrew Bayle
Tullymorgan, NSW

Ed: Boy, Andrew, you are out of touch - and you don't even live very far from the hub of the Australian Amiga community! First, let me steer you in the right direction for some clever contacts - they're to your right about nine pages in the Adventurers Realm section. Just write to the address listed for Free Hint Sheets and Kerrie Spiteri will send you an updated list. This would have to be the best adventuring service in the world - and it's free!

As for the mag you saw in your local newsagent, it may have been our ACAR Annual. This is a special edition we bring out - wanna guess? - once a year. It's packed full of special features and reference material, and it's naturally a little more expensive than our usual monthly bargain edition.

As for swapping games, if there are any readers out there who'd like to do business with Andrew, drop us a line, or contact him direct at Tullymorgan NSW - you won't need a street address, cause there's only one street! Finally, no, Wolfie just wouldn't work on the Amiga - and it won't until we get a graphical equivalent of the PC's VGA mode "fat-bits".

Quick Question

Dear Phil, Where can we get a copy of *Twin World*?

Peter Ramshaw

Ed: I don't know. Try a software shop.

A Helpful Pom!

Dear Phil, The point of this letter is in part to assist Matt Lowe (May letters) who wanted to start up his own PD Library and found all people wanted to do was 'pirate software'. I sympathise with the gentlemen as over here piracy too is rife. However if people are willing to make a stand it's amazing what is available. Having replied to many people all over the world in my search for honesty your country is not too bad, believe it or not. Europe is very bad. So if Matt would like to contact me I will offer my assistance.

Before closing, I notice some of the people over there have trouble with firms over here and I am willing to act as a go between for ANYONE who wants me to buy software on their behalf or contact a company as long as:

a) all postal charges for sending the software are met by the purchaser.

b) monies are paid in advance of purchase.

c) people confirm in writing to me first.

As long as these conditions are met I will buy the software - money to be paid either in pounds or American dollars. The most obvious question now is "Why is he offering this service?"

Answer "To keep the Amiga alive and to gain some good friends who will buy things cheaper for me and vice versa." One word of warning - heavy items are extremely expensive to post, however I can buy most items much cheaper then advertised.

James Abram
44 Virginia Road, Albrighton
Wolverhampton, West Midlands
WV7 3NP

Ed: Thanks for the letter, James - it's nice to know we're read on the other side of the world! If anyone wants to take up James on his offer, remember that the risk is all yours - no endorsement is implied or offered by the publication of his address in this magazine.

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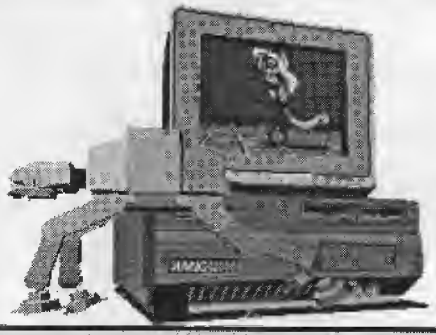

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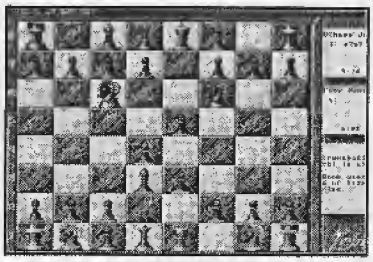

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KGB

Full Solution Part 1

Back in the bad old days, the very letters KGB were enough to fill anyoneís heart with nasty thoughts. These days, things are different - or so they say. Mind you, if youíre stuck in the middle of KGB - the computer game - you might have some nasty thoughts of your own! Expert adventurer Mark Harris has cracked every mystery the game has to offer, so if you really want to get through that tight spot thatís got you trapped, read on! As always, though, be warned ... reading the whole solution can take all the fun out of the game. Itís best to simply find the help you need, then play on unassisted. Okay, on with the show.

Chapter 1

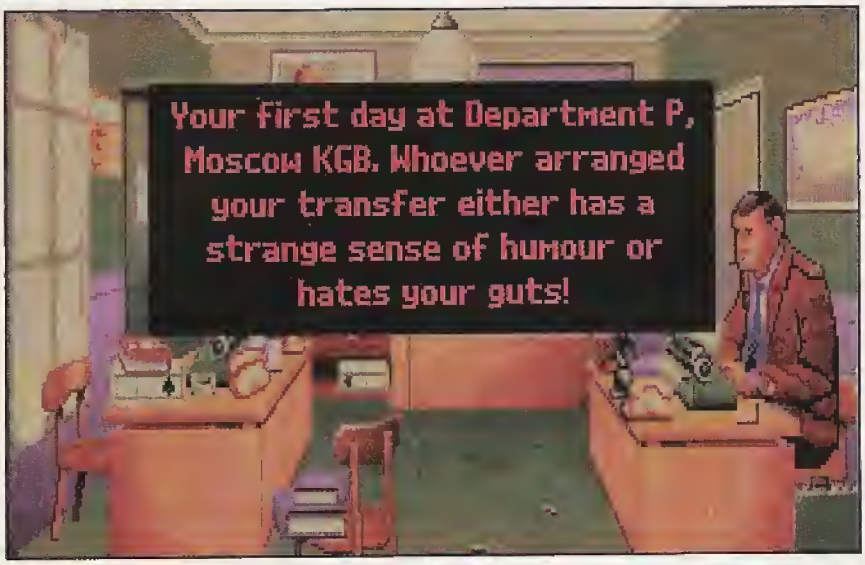
Exit your dingy little office. Enter upper left room (Comrade Vovlov's office) and snap to attention. Get your first assignment, leave the room, go to the exit (lower right door). Select Golitsin's office, go to the crime scene, say your name to militiaman, and show him your ID. Go into the building, inspect the desk, get the matchbox & matches, inspect the phone - make sure you get the bug. Now inspect the drawer (locked), and inspect the radio. Darn, there's no decadent Western music playing! Get the batteries and leave the room. Ask the militiaman for the key to the drawer. Enter the room again, use the key on the drawer, get the newspaper-cutting and the recorder, then wait until Golitsin's sister arrives. Question her - it's time for your big bad K.G.B. act! Tell her she may leave - she'll give you a tape. Use batteries on the recorder, then use tape on the recorder.

Inspect the window, then leave the room, giving the small key to the militiaman. Go to Department P, and follow Vovlov to his office. Tell him you obeyed his orders and interviewed Golitsin's sister. Give him the cassette, and tell him you listened to the tape. Answer "Hollywood".

In Colonel Galushkin's office you'll receive another mission. Go to the exit, select Uncle Vanya's place, go to your bedroom - no, you haven't been naughty - inspect the closet, get clothes, wear them, inspect the drawer, get $60, then exit. Now go to Kursk Street, turn left, enter the door, go up, use the match on the matchbox, inspect the cupboard, get the clipboard, go down, go outside, and go left four times. Enter the building, go up, drop the clipboard, and enter the club (lower right door). Say "The barman said it's ok", then say "Allow me to contribute to club funds." Offer $30. Talk to the members, and wait for punk to leave the toilet, then enter, use the light switch and get the heroin from the waste-basket.

Go to the exit door, get the clipboard, knock at door 7, and tell the girl (Hubba Hubba!) you want to ask her a few questions. Answer anything. Once inside: talk to girl on the left, tell her you aren't doing a opinion poll, then answer: 2nd, 1st, 2nd, ask about the neighbours (Scott and Charlene?) in general then about Bellusov and Chevchenkova; say "I'm investigating..." then 2nd, 1st, exit room. Knock at the door 5 (Bellusov), select the question about Lefortovo then 1st, 1st, 1st, go down, knock at door 4, answer "no" then 1st. Inside: 3rd, 1st, 2nd, exit room (you should spot two guys going up), up, and drop clipboard.

Now go into the club, talk to Petka, and fight Lyonka - it's time for your Jeff Fenech impression! Inspect him, get the lockpick, move the body right, then move the body into the trashcan - after all, remember to recycle! Now go right five times, use the lockpick on the door, enter, and go to the lower exit. Use the match on the matchbox. Inspect the cash desk, flick the switch,



go through the left door, use the lightswitch, and then inspect the carcasses.

Now exit, go through the right door, use the match on the matchbox again, and inspect the desk. Flick the switch, go through the right door, then go through the right door again. Go right four times, enter, go up, knock on door 6, answer: 3rd, 2nd, 3rd, 2nd, then inside: 2nd, 3rd, 2nd, outside: drop the heroin, and use the lockpick on door 8. Go upper right door, use the light switch, inspect the drawer, get the tape, and use it on the VCR - inspect all, and get everything. Say anything you like. You're now in a small room - inspect the table, get the bug and destroy it, then wait for Rita to enter the room.

Tell her all four possibilities; answer: 3rd, 1st, 3rd, 1st, 1st, 3rd. Harry Greenberg will be pushed inside - answer him: 3rd, 2nd - Rita runs away. Talk to Greenberg, listen to the door, show the bug to Harry, then inspect the buzzer above the door. Answer 1st, 1st, then decide to call Rita. Answer: 4th, 1st, 1st, 1st, 2nd. 1st, 3rd, and then fight Rita. Now give the second answer. Move Rita onto the couch. inspect the drawer, get everything.

Now go through the upper right door, inspect all, get everything, and go back. Use the camera on the white paper (Smile!), and then put the paper into the drawer to the left. Hide behind door 8, and wait - Verto enters. Fight him (more action than a Western!). Inspect him, and get everything. Use the camera on the blue paper, put the blue paper on Verto, go to door 8, go down, outside, and then right five times. Examine all the photos - you should find 2 texts: LNNRDU13MAOAAK, and EIGAAG6PLDGPR.

It means: Leningrad, Aug 16, 3PM, Ladoga Park. Go to Department P, answer Vovlov with the 1st option; answer Galushkin: I must go to Leningrad, Ladoga Park, 3 in the afternoon, August 16. Talk with Guzenko.

Chapter 2

Go through the left door, answer the phone, say "no", go to the bathroom, (Tinkle Tinkle) and use the lightswitch. Inspect the light above the mirror. Get the paper, go back to the room, decode the paper or call Guzenko in Moscow for hints, turn the light off and on three times, then call 37452. Drop everything except your ID, exit the room, go down, go to the main door, go to the exit, and select Department 7. Enter the building, giving your ID to the Inquiries Officer. Answer 1st, 1st, then show your pass to the guard, and give answer number 5. Answer Kusnietsov 2nd, 1st, 3rd; in Agabekov's office, inspect the phones. Go to door, exit, go to Chapkin's room (3rd on the left), and use the phone to call Agabekov. Answer: 1st, 1st, 1st, and 1st - the guard will enter the room so exit immediately, then wait - when Agabekov leaves, enter his room. Inspect the trashcan, get the cigar butt, and then exit.

Go outside and back to Hotel Gostinitsa. Go to your room, get all, and use the headphones on the listening device. Now exit the room, and leave the hotel. Go to the exit, select Ladoga Park, go left, and put the microphone on the bench. Use the listening device, choose record, and hide behind the hedge. Wait three times, then get the microphone. Go right, go to the Metro, wait twice, then decide to follow Romeo's contact. Use the camera on the keypad.

Go into the bar - say "hi" to Fatty Vautin if he's there. Go through the left door, go through the upper door, go up, then inspect the window and unlock it. Go down. Go to the upper door and inspect the window - unlock it, and go through the lower door. Go through the lower door and you're back on the street. Use the keypad (14C9A). Now go through the upper door, go up, and unlock the window. Go down, go through the left door, and put the microphone on the books.

Leave the room,hide behind the packing cases, and use the listening device: stop, rewind to the start, and play stored recording 1. Record. wait three times, rewind the tape, play all the messages and start recording again. Wait twice, (Obukov enters), wait twice (Obukov leaves); now put the listening device (still recording) on the packing cases.

Continued next month! ❑

Pinball Fantasies

Donít like hanging out in those smoke filled pinball parlours? Well, now you can play pinball in the comfort of home. Phil Campbell investigates the latest pin-sim.

FACTBOX

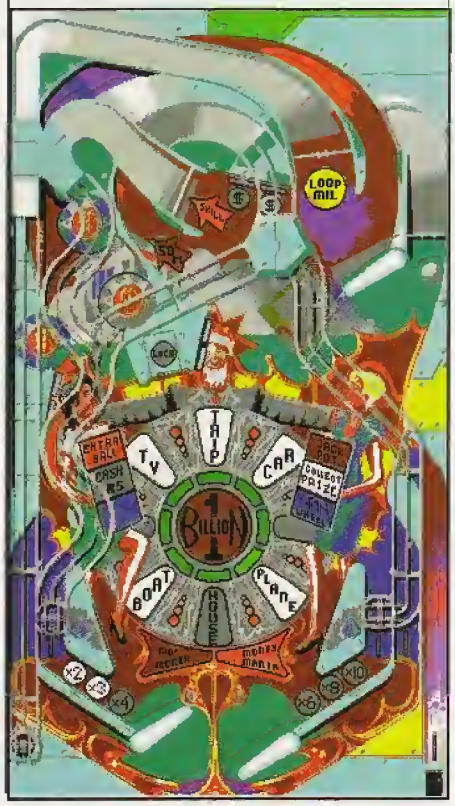
The best pinball game ever. With huge, bright, highly detailed tables and top class gameplay, you'll think you're playing the real thing.

Ratings:

Graphics:	92%
Sound:	81%
Gameplay:	94%
Overall:	91%

Distributed by Hot Point Software (02) 428 7791. RRP $69.95.

Contrary to popular expectations, the ancient art of Pinball is alive and well. Walk into any seedy city games parlour and there they are - in the middle of all the video wizardry of the new generation games, you'll always find three or four pinnies. And usually, a queue waiting to play. Some are the classic oldies - electromechanical dinosaurs full of relays and switches and incandescent bulbs. And some are hybrids - an old idea brought up to date with sound-synthesiser chips and micro-electronics. Either way, everyone still loves pinball.



Enter *Pinball Fantasies*, sequel to the superb *Pinball Dreams*. Released late last year in Europe, *Pinball Fantasies* has been the subject of an Australian distribution tussle that has seen only limited supplies trickling onto software store shelves. But finally, that's all changed - new kids on the block HotPoint Software are now distributing the game, and you can grab a copy at your nearest Brashs store.

Pinball Fantasies doesn't just simulate a pinball machine - it simulates a whole arcade, with a choice of four different tables. Each has a distinct theme and layout.

Controls are elegantly simple. Select one of the four tables (Partyland, Speed Devils, Billion Dollar Gameshow or Stones'n'Bones) with function keys F1 and F2. Select the number of players - anything from one to eight. And then play. It's easy. The left and right shift, ALT and Amiga keys activate the left and right flippers - that's right, all of them work - the down arrow key or the mouse pull back the spring, and in desperate moments, the space-bar tilts the table. There are no joystick options - but who needs 'em?

Okay, let's stick a coin in the slot and check out the action. The first thing you'll notice is the size and detail of the display. Most other pinball games reduce the game table to the size of a single screen, which means you need good eyes to follow the ball. *Pinball Fantasies* takes a different approach. The full height of the game table takes up almost three screens - as you play, the table scrolls up and down to follow the ball. A successful approach and far better on the Amiga than on the PC version.

The table backdrop is bright and vivid. On the Partyland table there are clowns and balloons and fairground images. The game-show table adopts a glitzy *Wheel of Fortune* theme, Speed Devils has racing cars, and Stones 'n' Bones ... you guessed it! Skulls, tombstones and other tasteful stuff. Like any self respecting modern pinnie, there's a simulated scrolling light display across the top of the table where you can read your score - or a bunch of zany comments.

In play, the action is fast and smooth. Pull back the spring, and the ball glides up the side channel. Control is realistic - to fire the ball harder, hold down the key longer. Every bounce is absolutely authentic, mathematically simulated to the last decimal point.

My score? Well, I'd rather not say. My first game was sensational, but from there on it was all downhill. But the fact is, I'm playing every bit as badly as I do on a REAL pinball machine. And that means *Pinball Fantasies* is an incredibly accurate simulation. In most sim-software, there's always a "stretching of credulity" - sure, in a flight-simulation you can PRETEND you're flying. And in a golf simulation, you can PRETEND you're on the course. But *Pinball Fantasies* is practically identical to a real parlour pinnie. ❑

Indiana Jones and the Fate of Atlantis

by Graeme Beaven

FACTBOX

Indiana Jones and the Fate of Atlantis is destined to become a classic, and sets a new standard for all other graphic adventures to follow.

Ratings:

Graphics:	94
Sound:	92
Gameplay:	92
Overall:	94

Distributed by Sega-Ozisoft (02) 317 0000. RRP $79.95.

He's back - bigger, brighter and bolder than ever, Indiana Jones is ready to take on the biggest adventure of his life.

The story begins in 1939, inside prestigious Barnett College. The German Army is preparing to mobilize its forces in central Europe, and the world is at flashpoint.

In the opening scenes, Indy begins searching for a small bronze statue which he unearthed in an earlier expedition. When he finally finds it, he returns to his two colleagues who have located the special key needed to open the statue's base. They gather around, not knowing of the events which are about to unfold. Indy inserts the key, and carefully removes the base. He looks inside and takes out a small, brightly coloured metal bead that was hidden within.

Indy will soon discover that the bead was made from Orichalcum, the ancient metal that was cast into beads and used as the energy source on the lost continent of Atlantis. Orichalcum can produce power rivalling that of a nuclear energy, without the effects of radiation. It is rumoured that this metal was so powerful that it may even have caused Atlantis to sink beneath the ocean.

If knowledge of a bead with this much power were ever to fall into the wrong hands, the history of the world would be changed forever. Suddenly, one of Indy's colleagues reveals himself to be a Nazi spy. He immediately snatches the bead from Indy's grasp and escapes through an open window.

Where does Orichalcum come from? And what happened to the lost continent of Atlantis? Can Indy get there before the Germans can take advantage of the mighty power of the bead? It's up to you!

First, Indy travels to New York to enlist the help of his former assistant Sophia Hapgood, who is a renowned expert on Atlantis and a part time psychic. She suggests that they search for the book called *The Lost Dialogues of Plato* which is the definitive text on the ancient continent.

Together they travel to Iceland on

the first leg of an adventure that will span four continents and require the solving of many puzzles before the ultimate destination is reached and the mystery is finally solved.

Right from the outset this game spells quality. The beginning starts with a movie-like sequence where you make a few moves in search of the statue. Then the game credits roll onto your screen like the opening of a movie. The scenery in the game is absolutely brilliant, and the attention to detail is impeccable. Scrolling is extremely smooth and well polished.

The "iMuse" music system is excellent, and complements each scene perfectly. The music changes at the appropriate moment to create the right atmosphere right through the game. This is definitely the best in-game music system yet created for the Amiga.

The control system uses a simple point-and-click interface as in *Monkey Island 2* and most current graphic adventures. You simply construct sentences by clicking on the available verbs and then on an item in the main screen or in your inventory. There's always a huge variety of choices in constructing sentences and the moods of the characters change depending upon the choices you make.

A unique feature of the game is that there are three different paths to take in order to reach Atlantis. After locating Plato's book, you can then decide to take Sophia with you and choose the "Team path", or you can go alone and choose the puzzle solving "Wits path" - or if you like to have some arcade action sequences, you can choose the "Fists path". Each path has different puzzles to solve, which in effect gives you three games in one.

The game comes on 11 disks which means that there is quite a lot of disk swapping, but it can also be installed on a hard disk. If you're a seasoned Adventurer this game is a must buy. If you haven't played an adventure game before then check this game out and give it a try.

Highly recommended.

Rookie chopper-pilot Laetone Gravolin takes to the skies in the best air action epic ever to hit your Amiga screens!

So you want a flight simulation with loads of arcade action? Realistic sound effects and superb graphical explosions? How about an AH-64 Apache helicopter with loads of weapons to play around with, on four exciting battlefields? Then *Desert Strike* is for you!

Your objective is to successfully blast your way through four campaigns and win the game. In each campaign there's a series of missions that you have to complete, and they must all be completed in order. For example, if the mission brief reads "Destroy radar sites and an air base," you must take out the radar sites first. If you decide to first go to the air base it will be on full alert and will be almost impossible to blow up.

The game set-up options let you choose your own co-pilot - a stunning feature. There's a perfectly digitised picture of each co-pilot, and a dossier

FACTBOX

Desert Strike is the ultimate arcade-action flight sim. With digitised sound from actual Apache manoeuvres to the tiniest small detail of the shadow, the great graphics and stunning effects put a punch back into Amiga Gaming.

Ratings:

Graphics:	93%
Sound:	90%
Gameplay:	91%
Overall:	95%

Distributed by Electronic Arts (075) 911 388. Approx $70.

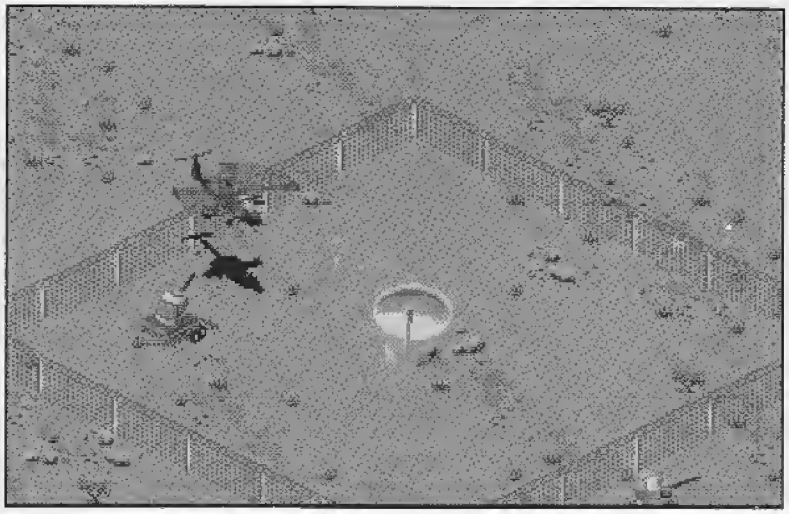
detailing his skills on the winch and as a marksman. You'll need a good winch-man to pick up MIAs (soldiers missing-in-action) behind enemy lines, fuel, ammo, and other small peripherals you can add to your chopper - it's amazing what you'll find lying around in the desert. The Marksmanship rating determines how well your chopper can apply damage, and how quickly you'll hit enemy targets.

There are all sorts of nasties waiting for you once you go into your battlezone - anti-aircraft guns; little enemy soldiers who think they can be big heroes and blow up your chopper with a machine gun (naturally, you just have to lob a couple of missiles on them to neutralise the threat); missile launchers; and plenty of other weird and wonderful machines of war.

The effects are excellent. When you fly near an MIA he shouts out "over here" - the sound is really natural, though I'm not sure a real chopper pilot could hear a guy yelling from the ground. When you blow up a guard post you'll see a mighty explosion and watch the tiny soldier collapse to the ground - you'll hear his dreadful "arrrrrrgh" too. Graphically, the game is very impressive. The action takes place in isometric 3-D view; and unlike a standard flight sim, your viewpoint is from outside the chopper. The sea and the sand dunes look great, with a good sense of perspective. There is a detailed shadow underneath your chopper that follows you everywhere, adding real depth.

Warnings are given when fuel or armour are low. If you don't find fuel drums within about fifteen seconds, you will lose a life. Your Apache is equipped with eight missiles, thirty eight rockets and a lovely mini gun which holds one thousand one hundred and seventy eight hollow head bullets - quite destructive!

Your map tells you the current game status. It delivers information about all of the enemy weapons and the locations of your targets. If you successfully complete your campaign there's a nice movie sequence showing you and your friend happily celebrating - better still, you'll be given the password for the next campaign so you can skip number one and go straight on to two. On the other hand if you get shot down more than three times there is a nice animation of the chopper that looks like a mashed up piece of metal, your co-pilot is lying beside it with only one arm and leg, and you have a big hole in your head. Oh, and you musn't forget the little enemy twerp up on the hill waving his rifle in the air!



MICHAEL SPITERI'S Adventurer's Realm

Christmas is creeping towards us quite quickly and the last thing you want to be doing during this time of year is pulling your hair out in the wee hours of the morning trying to defeat an invincible androidess. No! no! no! You should be happy and cheery, spending time with the family, eating roast turkey, hoeing into the plum pudding and dropping casual hints as to the new adventure game you'd like to see under the tree. Yes, now we're talking!

Really, you must wait until late into Boxing Day before you box your brain into tackling *Leisure Suit Larry 6* (yes, it'll be out soon!) for 72 hours non stop. Hey - who needs booze to achieve those New Year's Day lead weight eyes, a dose of *Return to Zork* will do thank you very much.

Whoa, let's back up a little first and try to solve the problems of your existing adventure games and worry about the new ones later. That's why I'm here, along with Kerrie (and her thousands of hint sheets), Kamikaze Andy and his gossip and role playing game hints, and our band of merry Clever Contacts (coming soon to a town near you). We reduce the hair loss rate quicker than Ashley & Martin and bring you back your sleep as good as any cup of hot chocolate.

If you are stuck in a game, first have a crack at it yourself (have you covered every avenue? - bet you haven't), then see if your game has a free hint sheet for it (see Kerrie's Free Hint Sheet Dept). No luck? Write to one of our many Clever Contacts (they are everywhere - ask Kerrie for a complete list). If that fails, then you can always spend a few dollars on one of our hint books and hint disks, or if money is a bit of a sour point send the problem to me. Make sure you enclose a stamped addressed envelope though.

Of course, don't just write to me with your problems. I'm interested in your news and views and gossip and rumours and complaints and what games you are buying and selling and swapping and looking for and throw in some good hints and tips for good measure. Anyhow, enough of my waffling on, the address to write to is: Adventurers Realm 12 Bridle Place, Pakenham, Vic 3810.

Kamikaze Andy lives in his Dungeon and can offer hints and tips for role playing games and quite a few adventure games. He is our RPG guru and you can write to him at: Realm's Dungeon, PO Box 1083, Canning Vale, WA 6155. (Don't ask him for hint sheets).

Always enclose a stamped addressed envelope when writing to any address (including Clever Contacts) listed in Adventurers Realm.

Free Hint Sheets

Kerrie, the mysterious Lady of the Realm, receives lots and lots of mail and she'd like to know if anyone has a charitable need for used postage stamps. If so, please cry out. Kerrie is currently racing through all the hint sheet requests in true Melbourne Cup fashion, but believe me - the course is much longer! So make her job easier by enclosing a business sized stamped addressed envelope and listing no more than four hint sheets from the selection below.

Hint sheets currently available are: *Mortville Manor/Maupiti Island, Monkey Island I, II, Space Quest III, V, Wonderland, Leisure Suit Larry 3, Champions of Krynn, Kings Quest V, Pool of Radiance, Zak McKracken, Zork 1, 2, 3, Bards Tale 1, 2, 3, Hitchhikers' Guide to the Galaxy, Guild of Thieves, Jinxter, The Pawn, Corruption, Faery Tale, Indiana Jones and the Fate of Atlantis, Loom, Space Quest II*, and the 1993 Clever Contacts Listing.

The only address to write to for free sheets is: Free Hint Sheets, 12 Bridle Place, Pakenham Vic 3810.

Realm's Hint Books

A handful of the First Adventurers Realm Hint Book have been discovered in the vaults of Saturday Magazine. $9 will get you a book packed with detailed hints and tips for over 40 adventure games. Even better, order the Second Adventurers Realm Hint Book for just $10, and you'll receive a book packed with hint and tips for over 25 adventure and role-playing games and heaps of mapping sheets! To order, drop a line to Darrien Perry at 21 Darley Road, Randwick, or give her a ring on (02) 398 5111.

Realm's Trading Post

Free advertising. Now. Here. With Results. If you are looking to buy, sell or swap or even search for a game, send the details to Realm's Trading Post, 12 Bridle Place, Pakenham, Vic 3810. All but pirates are welcome here.

Terry Baker of 3/5-13 Dellwood Street, Bankstown, NSW 2200 writes:

"Thanks to all those who replied to my last letter for Amiga games. Having finished a few I would like to swap them. If anyone has a copy of *Pirates* for the Amiga I would really like to do a deal. Also *Monkey Island 2, Bards Tale 1* or *3*. I have *Monkey Island 1* and *Manhunter 1 & 2* to trade (treat the two *Manhunters* as one pack)."

You can phone Terry on (02) 790 5374 after 7pm.

G. Noonan of 80 Chelmsford Street, Newtown, NSW 2042 is willing to pay top dollar for an original *Legend of Faerghail, Demon's Winter, Phantasie II* or *IV*, or any *Ultima* before *IV*.

Andrew Boyle of 32 Spring Valley Drive, Goonellebah, NSW 2480 is after some pals to swap games via mail (MS: legit, I hope, Andrew). Drop him a line!

Clever Contacts

Our Clever Contacts are adventurers who have volunteered their time and patience to solve your problems. They are everywhere and they are contagious.

New Clever Contact this month is Jonny Corfield of 56 Third Street, Boolaroo, NSW 2284. Jonny can help in *Larry 1, 2, 3, Kings Quest 1, 2, 3, 4, Manhunter 1, Police Quest 1, 2,* and *Space Quest 1, 2, 3.*

Meanwhile, popular Clever Contact Kathy Kupresak has changed her address to 8 Wuronga Hill, Bonython, ACT 2905.

Always enclose a stamped addressed envelope and sufficient funds to cover printing and photocopying when using a Clever Contact.

Many thanks to our trusty volunteers out there - your day will come in time!

Realm's Hint Disks

As announced last month, Graeme Beavan has put together a second super hint disk. This second installment is packed with over 90 detailed solutions - and none of these were on the first disk! The second disk also features maps for *Faery Tale, Dungeon Master, Eye of the Beholder* (1 & 2), and *Wonderland*! It's also a lot snazzier with better fonts, a new point'n'click menu and even some background music! If you'd like either volume 1 or 2 (or even both) of the hint disks, they cost just $7.00 each (including p&p), or just $5.00 each if you supply the blank disk and stamped addressed envelope. Send a cheque (made out to Michael Spiteri) for the required amount to Realm's Hint Disk, 12 Bridle Place, Pakenham, Vic 3810.

Australian Commodore & Amiga Review back issues still available

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January 1993 Vol 10 No 1
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● Show Report - WOC Amiga Show ● Vidi Amiga 12 ● Final Copy II ● Amiga Games Console ● Perfect Sounds - sound digitising ● A Quick Intro to Desktop Video ● Hypercache Professional ● Education - Aust Graphics Atlas ● CanDO - Communications program and printer utility ● DPaint Tutorial - Floating Baubles ● C64 Column ● Amos Column ● OpalPaint's Zap function ● Hot PD ● **Games** - Hired Guns, Trolls, Graham Gooch World Class Cricket **Solution** - SuperFrog Part 2

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● Art Expression - Paint Program ● 68060 - the Next Generation ● Power Copy Professional ● Quarterback Tools Deluxe - for disaster recovery ● CanDo 2.5 Upgrade ● DPaint Tutorial - Animation feature - Global Whirling ● Hot PD ● The C64 Column ● Amos Column - AMOS Pro V.2 update and Amos Pro Compiler ● CanDo - Speech Utility ● Education - Back to Basics Fractions ● Andy's Attic - How to create a RAD drive ● Games - Creatures, Flashback, SuperFrog, BodyBlows, Dark Seed - Solution

October 1993 Vol 10 No 10
● DPaint AGA ● PC Task MS-Dos emulation without hardware ● Ami-Back Tools vs Quarterback Tools Deluxe - Recovery software ● Personal Paint - Affordable entry level paint program ● Hot PD ● Blitz 'em - Adding commands to Blitz Basic ● Andy's Attic - Workbench Tools ● DPaint Tutorial - Dark Side of the Moon ● Education Column - Learn to play the Piano ● CanDo - Make your own Calendar ● C64 Column - Graphics Software ● Games - Campo's International Rugby, Reach for the Skies, Project X Revised Edition, Syndicate, Street Fighter II, Dune II

$3 each including postage.
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Saturday Magazine, 21 Darley Rd, Randwick NSW 2031.
Ph (02) 398 5111 Fax (02) 398 5322.

The Adventure Problem Centre

This is the part of the Realm where problems are displayed for all to peruse and also solutions for those to enjoy. If you were stuck a few months back then keep your eyes peeled on this part of the mag.

Michael Goodman of Moorebank in NSW writes:

"I really need some help with *Wizardry's Bane of the Cosmic Forge*. I have the following items that I haven't used yet: Dagger of Ramm, Kings Diary, wine bottle, goat mask, metal hook, mystery oil, green parrot, one key spades, one chrome key, and one bell key. I've used Reveal Secret spell in all towers, dungeons, group and upper castle levels, in area under altar and through altar dungeon area. I can't get past altar dungeon chasm (no rope!), I can't swing across gap in bell tower (keep getting thrown back), and I can't open any gates with the keys I have. There is also a black door that needs two gems for eyes that I don't have. Somebody tell me what to do next, please!"

Mike: Phew! At least you cannot accuse Mr Goodman of being brief. He sound as if he's getting pretty desperate, so please reply soon to this request.

Aaron Danks writes with some hints for some of the older Sierra games:

"By pressing Alt-D at anytime during an old Sierra game such as *Police Quest 1* or *Larry 1* you can enter the Sierra test screen. From this point you can press TP for transport or Get Object, then typing in a number for the room or object. You will need to try it a few times and make a list of numbers, objects, and room numbers to work effectively."

Mike: Thanks for that handy adventure cheat, Aaron, and also for this *Monkey Island 1* tip:

"At one stage in the game you will be stuck in the jungle not knowing what to do, so try putting your yellow flowers in your casserole and then anyone who eats it will fall asleep. Very handy."

Also from Aaron is this *Larry 3* hint:

"Most times when you arrive at the beach you find you have forgotten one part of your bikini and you can't just walk around in the nuddy. When you are onboard the ship, grab the bikini at the bottom of the swimming pool, also if you can't find a way to board the ship because you've misplaced your passport, I suggest you look in the bin outside your home."

Here is a swag of hints for playing *Railroad Tycoon*, courtesy of Michael James Harrison of Christies Downs in South Australia.

"1) The only way you can make any real money in this game is by being on Tycoon level. The other levels limit you in some way (eg taking over other railroad companies).

"2) The first step is to find two large cities which are not too close to each other (the closer they are the less money you make). Use two carriage trains - one for the passengers and the other for the mail.

"3) In the first two years, pay off that $500,000 bond because the interest rates can kill you during the recession. Next, try to get as many treasury shares as possible.

"4) When another railroad company looks like it's getting strong (ie over $20.00 per share) then start buying into the company. You can only take over a company at Tycoon level (and you'll receive a big bonus at the end).

"5) Near the end, most of your profits will be coming from the share market, so don't worry too much about the trains."

Mike: Just perfect for making a start in the popular *Railroad Tycoon* (the product of Sid Meier, creator of mega-classic *Civilization*). Michael requires some help in return:

"I have a problem with the game *Ultima 6*. When trying to install a new character it tells me to run the install program but after all files on the disk I can't find it. Does anyone know where it is or how to load it?"

Finally, Kurt Varian of Hazlebrook NSW writes:

"I was wondering if anyone has some hints on the Dynamix adventure game *Heart of China*. I seam to be stuck in Chengu, in the ancient fortress where I can't find a way to free Kate Lomax from the snakes. Please help me!"

Mike: Kurt would also like some other hints to keep him going.

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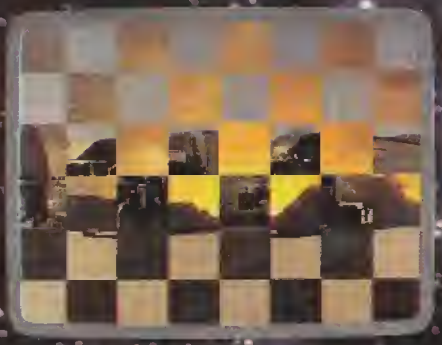

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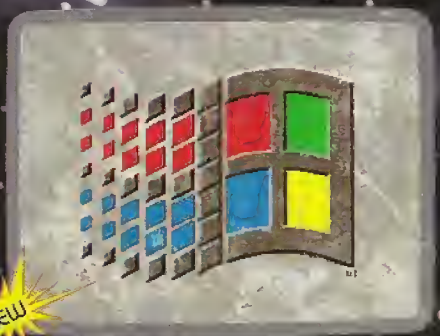

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